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 NEWS  2  Apr 08  "Ask CAS" for self-help around the clock
 NEWS  3  Apr 09  BEILSTEIN: Reload and Implementation of a New Subject Area
 NEWS  4  Apr 09  ZDB will be removed from STN
 NEWS  5  Apr 19  US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
 NEWS  6  Apr 22  Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
 NEWS  7  Apr 22  BIOSIS Gene Names now available in TOXCENTER
 NEWS  8  Apr 22  Federal Research in Progress (FEDRIP) now available
 NEWS  9  Jun 03  New e-mail delivery for search results now available
 NEWS 10  Jun 10  MEDLINE Reload
 NEWS 11  Jun 10  PCTFULL has been reloaded
 NEWS 12  Jul 02  FOREGE no longer contains STANDARDS file segment
 NEWS 13  Jul 22  USAN to be reloaded July 28, 2002;
                  saved answer sets no longer valid
 NEWS 14  Jul 29  Enhanced polymer searching in REGISTRY
 NEWS 15  Jul 30  NETFIRST to be removed from STN
 NEWS 16  Aug 08  CANCERLIT reload
 NEWS 17  Aug 08  PHARMAMarketLetter(PHARMAML) - new on STN
 NEWS 18  Aug 08  NTIS has been reloaded and enhanced
 NEWS 19  Aug 19  Aquatic Toxicity Information Retrieval (AQUIRE)
                  now available on STN
 NEWS 20  Aug 19  IFIPAT, IFICDB, and IFIUDB have been reloaded
 NEWS 21  Aug 19  The MEDLINE file segment of TOXCENTER has been reloaded
 NEWS 22  Aug 26  Sequence searching in REGISTRY enhanced
 NEWS 23  Sep 03  JAPIO has been reloaded and enhanced
 NEWS 24  Sep 16  Experimental properties added to the REGISTRY file
 NEWS 25  Sep 16  CA Section Thesaurus available in CAPLUS and CA
 NEWS 26  Oct 01  CASREACT Enriched with Reactions from 1907 to 1985
 NEWS 27  Oct 21  EVENTLINE has been reloaded
 NEWS 28  Oct 24  BEILSTEIN adds new search fields
 NEWS 29  Oct 24  Nutraceuticals International (NUTRACEUT) now available on STN
 NEWS 30  Oct 25  MEDLINE SDI run of October 8, 2002
 NEWS 31  Nov 18  DKILIT has been renamed APOLLIT
 NEWS 32  Nov 25  More calculated properties added to REGISTRY
 NEWS 33  Dec 02  TIBKAT will be removed from STN
 NEWS 34  Dec 04  CSA files on STN
 NEWS 35  Dec 17  PCTFULL now covers WP/PCT Applications from 1978 to date
 NEWS 36  Dec 17  TOXCENTER enhanced with additional content
 NEWS 37  Dec 17  Adis Clinical Trials Insight now available on STN
 NEWS 38  Dec 30  ISMEC no longer available
 NEWS 39  Jan 13  Indexing added to some pre-1967 records in CA/CAPLUS
 NEWS 40  Jan 21  NUTRACEUT offering one free connect hour in February 2003
 NEWS 41  Jan 21  PHARMAML offering one free connect hour in February 2003

 NEWS EXPRESS  January 6 CURRENT WINDOWS VERSION IS V6.01a,
               CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
               AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
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=> s leptin and leptin receptor
L1         4265 LEPTIN AND LEPTIN RECEPTOR

=> s l1 and bone mass
L2           41 L1 AND BONE MASS

=> dup rem l2
PROCESSING COMPLETED FOR L2
L3           19 DUP REM L2 (22 DUPLICATES REMOVED)

=> d l3 ibib abs tot

L3   ANSWER 1 OF 19  USPATFULL
ACCESSION NUMBER:        2002:179201  USPATFULL
TITLE:                   Intermittent administration of a growth hormone
                         secretagogue
INVENTOR(S):             MacLean, David B., Providence, RI, UNITED STATES

                              NUMBER       KIND    DATE
                         ---------------- ------ --------
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PATENT INFORMATION: US 2002094992 A1 20020718
APPLICATION INFO.: US 2001-940165 A1 20010827 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-229077P	20000830 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Gregg C. Benson, Pfizer Inc., Patent Department, MS 4159, Eastern Point Road, Groton, CT, 06340
NUMBER OF CLAIMS: 30
EXEMPLARY CLAIM: 1
LINE COUNT: 2898
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to the intermittent administration of a growth hormone secretagogue to a patient.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 2 OF 19 USPATFULL
ACCESSION NUMBER: 2002:149117 USPATFULL
TITLE: Methods of using agents that modulate bone formation and inhibit adipogenesis
INVENTOR(S): Baron, Roland E., Guilford, CT, UNITED STATES
Sims, Natalie, Fitzroy, AUSTRALIA
Sabatakos, Geogios, New Haven, CT, UNITED STATES
Nestler, Eric, Dallas, TX, UNITED STATES
Chen, Jingshan, Cheshire, CT, UNITED STATES
Kelz, Max, Penn Valley, PA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002077273	A1	20020620
APPLICATION INFO.:	US 2001-939709	A1	20010828 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-228450P	20000829 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE NW, WASHINGTON, DC, 20004
NUMBER OF CLAIMS: 30
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Page(s)
LINE COUNT: 2053
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention is based on the discovery that overexpression of .DELTA.FosB leads to bone formation and that .DELTA.FosB expression inhibits adipogenesis. The present invention provides methods of identifying agents that modulate bone formation and adipogenesis. Moreover, the present invention provides methods for identifying genes that are modulated by .DELTA.FosB and that modulates .DELTA.FosB, osteogenesis, and adipogenesis.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 3 OF 19 USPATFULL
ACCESSION NUMBER: 2002:32529 USPATFULL
TITLE: Treatment of skeletal disorders
INVENTOR(S): Ke, HuaZhu, Ledyard, CT, UNITED STATES
Steppan, Claire M., New London, CT, UNITED STATES
Swick, Andrew Gordon, East Lyme, CT, UNITED STATES

	NUMBER	KIND	DATE

PATENT INFORMATION:	US 2002019351	A1	20020214
APPLICATION INFO.:	US 2001-965760	A1	20010927 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1999-253329, filed on 19 Feb 1999, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-75491P	19980223 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Gregg C. Benson, Pfizer Inc., Patent Department, MS 4159, Eastern Point Road, Groton, CT, 06340
NUMBER OF CLAIMS: 44
EXEMPLARY CLAIM: 1
LINE COUNT: 1214
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to methods for treating bone loss in a mammal by administering to the mammal a therapeutically effective amount of **leptin** or a **leptin** mimetic. This invention also relates to methods for treating bone fracture, enhancing bone healing following facial reconstruction, maxillary reconstruction or madibular reconstruction, enhancing long bone extension, enhancing the healing rate of a bone graft, enhancing prosthetic growth and inducing vertebral synostosis by administering a therapeutically effective amount of **leptin** or a **leptin** mimetic. This invention further relates to methods and compositions comprising **leptin** or a **leptin** mimetic and estrogen, a selective estrogen receptor modulator or a bisphonate for treating the above-recited diseases and conditions.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 4 OF 19 USPATFULL
ACCESSION NUMBER: 2002:45595 USPATFULL
TITLE: Treatment of skeletal disorders
INVENTOR(S): Ke, HuaZhu, Ledyard, CT, United States
Steppan, Claire M., New London, CT, United States
Swick, Andrew Gordon, East Lyme, CT, United States
PATENT ASSIGNEE(S): Pfizer Inc., New York, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6352970	B1	20020305
APPLICATION INFO.:	US 1999-253329		19990219 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-75491P	19980223 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Criares, Theodore J.
LEGAL REPRESENTATIVE: Richardson, Peter C., Benson, Gregg C., Sherwood, Michelle A.
NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)
LINE COUNT: 1126
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to methods for treating bone loss in a mammal by administering to the mammal a therapeutically effective amount of **leptin** or a **leptin** mimetic. This invention also relates to methods for treating bone fracture, enhancing bone healing following facial reconstruction, maxillary reconstruction or madibular

reconstruction, enhancing long bone extension, enhancing the healing rate of a bone graft, enhancing prosthetic growth and inducing vertebral synostosis by administering a therapeutically effective amount of **leptin** or a **leptin** mimetic. This invention further relates to methods and compositions comprising **leptin** or a **leptin** mimetic and estrogen, a selective estrogen receptor modulator or a bisphonate for treating the above-recited diseases and conditions.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 5 OF 19 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 2002639865 MEDLINE
DOCUMENT NUMBER: 22286246 PubMed ID: 12399426
TITLE: The increased **bone mass** in deltaFosB transgenic mice is independent of circulating **leptin** levels.
COMMENT: Comment in: Endocrinology. 2002 Nov;143(11):4161-4
AUTHOR: Kveiborg M; Chiusaroli R; Sims N A; Wu M; Sabatakos G; Horne W C; Baron R
CORPORATE SOURCE: Department of Cell Biology, Yale University School of Medicine, New Haven, Connecticut 06510, USA.
CONTRACT NUMBER: AR48218 (NIAMS)
SOURCE: ENDOCRINOLOGY, (2002 Nov) 143 (11) 4304-9.
Journal code: 0375040. ISSN: 0013-7227.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200211
ENTRY DATE: Entered STN: 20021026
Last Updated on STN: 20021211
Entered Medline: 20021119

AB Transgenic mice overexpressing deltaFosB, a naturally occurring splice variant of FosB, develop an osteosclerotic phenotype. The increased bone formation has been shown to be due, at least in part, to autonomous effects of deltaFosB isoforms on cells of the osteoblast lineage. However, abdominal fat and marrow adipocytes are also markedly decreased in deltaFosB mice, leading to low serum **leptin** levels. Increased **bone mass** has been linked to the absence of **leptin** and **leptin receptor** signaling in ob/ob and db/db mice. Thus, in addition to affecting directly osteoblastogenesis and bone formation, deltaFosB isoforms might increase **bone mass** indirectly via a decrease in **leptin**. To test this hypothesis, we restored normal circulating levels of **leptin** in deltaFosB mice via sc implanted osmotic pumps. Complete histomorphometric analysis demonstrated that trabecular bone volume as well as dynamic parameters of bone formation was unchanged by this treatment in both deltaFosB transgenic mice and control littermates. This demonstration that restoring circulating levels of **leptin** in deltaFosB transgenic mice failed to rescue the bone phenotype further indicates that the marked increase in bone formation is autonomous to the osteoblast lineage.

L3 ANSWER 6 OF 19 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2002162550 EMBASE
TITLE: **Leptin** stimulates human osteoblastic cell proliferation, de novo collagen synthesis, and mineralization: Impact on differentiation markers, apoptosis, and osteoclastic signaling.
AUTHOR: Gordeladze J.O.; Drevon C.A.; Syversen U.; Reseland J.E.
CORPORATE SOURCE: J.O. Gordeladze, Department of Medical Biochemistry, University of Oslo, P.O. Box 1112, Blindern, N-0316 Oslo, Norway. j.o.gordeladze@basalmed.uio.no
SOURCE: Journal of Cellular Biochemistry, (2002) 85/4 (825-836).
Refs: 66

ISSN: 0730-2312 CODEN: JCEBD5
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Anabolic hormones, mechanical loading, and the obese protein **leptin** play separate roles in maintaining **bone mass**. We have previously shown that **leptin**, as well as its receptor, are expressed by normal human osteoblasts. Consequently, we have investigated how **leptin** affects proliferation, differentiation, and apoptosis of human osteoblasts. Iliac crest osteoblasts, incubated with either **leptin** (100 ng/ml), calcitriol (1,25(OH)(2)D(3); 10(-)9 M) or 1-84 human parathyroid hormone (PTH; 10(-8) M), were cultured for 35 consecutive days and assayed for expression of various differentiation-related marker genes (as estimated by RT-PCR), de novo collagen synthesis, proliferation, in vitro mineralization, and osteoclast signaling. The effects of **leptin** on protection against retinoic acid (RA; 10(-7) M) induced apoptosis, as well as transition into preosteocytes, were also tested. **Leptin** exposure enhanced cell proliferation and collagen synthesis over both control condition and PTH exposure. **Leptin** inhibited in vitro calcified nodule production after 1-2 weeks in culture, however, subsequent to 4-5 weeks, **leptin** significantly stimulated mineralization. The mineralization profile throughout the entire incubation period was almost undistinguishable from the one induced by PTH. In comparison, 1,25(OH)(2)D(3) generally reduced proliferation and collagen production rates, whereas mineralization was markedly enhanced. **Leptin** exposure (at 2 and 5 weeks) significantly enhanced the expression of TGF.beta., IGF-I, collagen-I.alpha., ALP, and osteocalcin mRNA. **Leptin** also protected against RA-induced apoptosis, as estimated by soluble DNA fractions and DNA laddering patterns subsequent to 10 days of culture. The expression profiles of Bax-.alpha. and Bcl-2 mRNAs indicated that **leptin** per se significantly protected against apoptosis throughout the entire incubation period. Furthermore, the osteoblast marker OSF-2 was diminished, whereas the CD44 osteocyte marker gene expression was stimulated, indicating a transition into preosteocytes. In terms of osteoclastic signaling, **leptin** significantly augmented the mRNA levels of both interleukin-6 (IL-6) and osteoprotegerin (OPG). In summary, continuous **leptin** exposure of iliac crest osteoblasts, promotes collagen synthesis, cell differentiation and in vitro mineralization, as well as cell survival and transition into preosteocytes. **Leptin** may also facilitate osteoblastic signaling to the osteoclast. .COPYRGT. 2002 Wiley-Liss, Inc.

L3 ANSWER 7 OF 19 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2002696750 IN-PROCESS
DOCUMENT NUMBER: 22345594 PubMed ID: 12457453
TITLE: Estrogen receptor alpha gene polymorphisms (PvuII and XbaI) influence association between **leptin** **receptor** gene polymorphism (Gln223Arg) and bone mineral density in young men.
AUTHOR: Koh Jung-Min; Kim Duk J; Hong Jeong S; Park Joong Y; Lee Ki-Up; Kim Shin-Yoon; Kim Ghi S
CORPORATE SOURCE: Division of Endocrinology and Metabolism, Asan Medical Center, University of Ulsan College of Medicine, 388-1 Poongnap-Dong, Songpa-Gu, Seoul 138-736, Korea.
SOURCE: EUROPEAN JOURNAL OF ENDOCRINOLOGY, (2002 Dec) 147 (6) 777-83.
Journal code: 9423848. ISSN: 0804-4643.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20021217

Last Updated on STN: 20021217

AB OBJECTIVE: The peak **bone mass** is recognized as an important determinant in the development of osteoporosis. We investigated associations between bone mineral density (BMD) and polymorphisms of the **leptin receptor** (LEPR) and estrogen receptor alpha (ERalpha) genes in young men. DESIGN: BMD, anthropometric characteristics, and serum **leptin** concentrations were measured in young men and compared with regard to the LEPR and ERalpha genotype. METHODS: From 219 healthy volunteers aged 20-34 Years, we genotyped the Lys109Arg, Gln223Arg, Ser492Thr, Ala976Asp, and Pro1019Pro variants of LEPR and the PvuII and XbaI variants of ERalpha using the polymerase chain reaction-restriction fragment length polymorphism method. We determined serum **leptin** concentrations by radioimmunoassay (RIA) and BMD by dual energy X-ray absorptiometry. RESULTS: The subjects carrying the Gln223 allele of LEPR had higher BMD at the lumbar spine compared with the subjects without this allele. There were no significant differences in BMD among PvuII and XbaI genotypes of ERalpha. However, an association between LEPR and BMD was noted in the subjects carrying the PP homozygotes of PvuII or the X alleles of XbaI, but this was not significant in those without these genotypes. CONCLUSIONS: This study indicates that the Gln223Arg polymorphism of LEPR is important for determination of the peak **bone mass** in men and that it is influenced by ERalpha gene polymorphisms.

L3 ANSWER 8 OF 19 MEDLINE DUPLICATE 3

ACCESSION NUMBER: 2002669322 MEDLINE
DOCUMENT NUMBER: 22317103 PubMed ID: 12429038
TITLE: **Leptin** directly regulates bone cell function in vitro and reduces bone fragility in vivo.
AUTHOR: Cornish J; Callon K E; Bava U; Lin C; Naot D; Hill B L; Grey A B; Broom N; Myers D E; Nicholson G C; Reid I R
CORPORATE SOURCE: Department of Medicine, University of Auckland, New Zealand.. j.cornish@auckland.ac.nz
SOURCE: JOURNAL OF ENDOCRINOLOGY, (2002 Nov) 175 (2) 405-15. Journal code: 0375363. ISSN: 0022-0795.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200301
ENTRY DATE: Entered STN: 20021114
Last Updated on STN: 20030107
Entered Medline: 20030106

AB Fat mass is an important determinant of bone density, but the mechanism of this relationship is uncertain. **Leptin**, as a circulating peptide of adipocyte origin, is a potential contributor to this relationship. Recently it was shown that intracerebroventricular administration of **leptin** is associated with bone loss, suggesting that obesity should be associated with low **bone mass**, the opposite of what is actually found. Since **leptin** originates in the periphery, an examination of its direct effects on bone is necessary to address this major discrepancy. **Leptin** (>10(-11) m) increased proliferation of isolated fetal rat osteoblasts comparably with IGF-I, and these cells expressed the signalling form of the **leptin receptor**. In mouse bone marrow cultures, **leptin** (>or=10(-11) m) inhibited osteoclastogenesis, but it had no effect on bone resorption in two assays of mature osteoclasts. Systemic administration of **leptin** to adult male mice (20 injections of 43 micro g/day over 4 weeks) reduced bone fragility (increased work to fracture by 27% and displacement to fracture by 21%, P<0.001). Changes in tibial histomorphometry were not statistically significant apart from an increase in growth plate thickness in animals receiving **leptin**. **Leptin** stimulated proliferation of isolated chondrocytes, and these cells also expressed the signalling form of the **leptin receptor**. It is concluded that the direct bone effects of

leptin tend to reduce bone fragility and could contribute to the high **bone mass** and low fracture rates of obesity. When administered systemically, the direct actions of **leptin** outweigh its centrally mediated effects on bone, the latter possibly being mediated by **leptin**'s regulation of insulin sensitivity.

L3 ANSWER 9 OF 19 MEDLINE
ACCESSION NUMBER: 2002085035 MEDLINE
DOCUMENT NUMBER: 21669872 PubMed ID: 11811550
TITLE: **Leptin** inhibits osteoclast generation.
AUTHOR: Holloway Wayne R; Collier Fiona McL; Aitken Cathy J; Myers Damian E; Hodge Jason M; Malakellis Mary; Gough Tamara J; Collier Gregory R; Nicholson Geoffrey C
CORPORATE SOURCE: Department of Clinical and Biomedical Sciences: Barwon Health, The Geelong Hospital, The University of Melbourne, Australia.
SOURCE: JOURNAL OF BONE AND MINERAL RESEARCH, (2002 Feb) 17 (2) 200-9.
Journal code: 8610640. ISSN: 0884-0431.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200208
ENTRY DATE: Entered STN: 20020129
Last Updated on STN: 20020803
Entered Medline: 20020802

AB Originally, **leptin** was described as a product of adipocytes that acts on the hypothalamus to regulate appetite. However, subsequently, it has been shown that **leptin** receptors are distributed widely and that **leptin** has diverse functions, including promotion of hemopoietic and osteoblastic differentiation. It has been recognized for some time that both serum **leptin** and **bone mass** are correlated positively to body fat mass and, recently, we have shown a direct positive relationship between serum **leptin** and **bone mass** in nonobese women. We now report that **leptin** inhibits osteoclast generation in cultures of human peripheral blood mononuclear cells (PBMCs) and murine spleen cells incubated on bone in the presence of human macrophage colony-stimulating factor (hM-CSF) and human soluble receptor activator of NF-kappaB ligand (sRANKL). The half-maximal concentration inhibitory of **leptin** was approximately 20 nM in the presence of sRANKL at 40 ng/ml but decreased to approximately 2 nM when sRANKL was used at 5 ng/ml. The majority of the inhibitory effect occurred in the first week of the 3-week cultures. Inhibition did not occur when the PBMC cultures were washed vigorously to remove nonadherent cells or when purified CD14+ monocytes were used to generate osteoclasts, indicating an indirect or permissive effect via CD14- PBMC. **Leptin** increased osteoprotegerin (OPG) messenger RNA (mRNA) and protein expression in PBMC but not in CD14+ cells, suggesting that the inhibitory effect may be mediated by the RANKL/RANK/OPG system. **Leptin** may act locally to increase **bone mass** and may contribute to linkage of bone formation and resorption.

L3 ANSWER 10 OF 19 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 2002486794 MEDLINE
DOCUMENT NUMBER: 22233733 PubMed ID: 12297277
TITLE: **Leptin receptor** isoform expression in rat osteoblasts and their functional analysis.
AUTHOR: Lee Yun-Jung; Park Jung-Hyun; Ju Sung-Kyu; You Kwan-Hee; Ko Jea Seung; Kim Hyun-Man
CORPORATE SOURCE: Laboratory for the Study of Molecular Biointerface, Department of Oral Anatomy, College of Dentistry and Intellectual Biointerface Engineering Center (IBEC), BK21 HLS, Seoul National University, Yeonkun-Dong, Chongro-Ku,

South Korea.
SOURCE: FEBS LETTERS, (2002 Sep 25) 528 (1-3) 43-7.
Journal code: 0155157. ISSN: 0014-5793.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200211
ENTRY DATE: Entered STN: 20020926
Last Updated on STN: 20021213
Entered Medline: 20021104

AB The genetic defect in producing the adipose hormone **leptin** results among others in a drastic increase of **bone mass** . The current understanding is that under normal circumstances, osteoblast activity is indirectly suppressed by a hypothalamic relay induced by **leptin**-signalling in the brain. To investigate whether **leptin** might also regulate osteoblast activity in a direct manner, expression of **leptin** receptors in rat osteoblasts was determined and their functionality was analyzed upon recombinant **leptin** treatment. Reverse transcription-PCR confirmed the expression of four among the six currently described receptor isoforms, which were also able to transduce cell signalling as shown by STAT3 phosphorylation after activation.

L3 ANSWER 11 OF 19 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2002394566 EMBASE
TITLE: Role of **leptin** in bone growth: Central player or peripheral supporter?.
AUTHOR: Reseland J.E.; Gordeladze J.O.
CORPORATE SOURCE: J.E. Reseland, Institute for Nutrition Research, University of Oslo, P.O. Box 1046 Blindern, N-0316 Oslo, Norway. j.e.reseland@basalmed.uio.no
SOURCE: FEBS Letters, (25 Sep 2002) 528/1-3 (40-42).
Refs: 33
ISSN: 0014-5793 CODEN: FEBLAL
PUBLISHER IDENT.: S 0014-5793(02)03161-7
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 026 Immunology, Serology and Transplantation
029 Clinical Biochemistry
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English

L3 ANSWER 12 OF 19 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2002017161 EMBASE
TITLE: [**Leptin** controls bone formation through a hypothalamic relay].
CONTROLE CENTRAL DE LA FORMATION OSSEUSE.
AUTHOR: Karsenty G.
CORPORATE SOURCE: G. Karsenty, Department of Molecular Genetics, Baylor College of Medicine, One Baylor Place, Houston, TX 77030, United States. karsenty@bcm.tmc.edu
SOURCE: Medecine/Sciences, (2001) 17/12 (1270-1275).
Refs: 48
ISSN: 0767-0974 CODEN: MSMSE4
COUNTRY: France
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 003 Endocrinology
005 General Pathology and Pathological Anatomy
029 Clinical Biochemistry
LANGUAGE: French
SUMMARY LANGUAGE: English; French

AB Menopause favors osteoporosis and obesity protects from it. In an attempt to decipher the molecular bases of these two well-known clinical

observations, we hypothesized that they meant that bone remodeling, body weight, and reproduction are controlled by identical endocrine pathways. We used mouse genetics as a tool to translate these clinical observations into a molecular hypothesis. The ob/ob and db/db mice were valuable models, since two of the three functions thought to be co-regulated are affected in these mice: they are obese and hypogonadic. Surprisingly, given their hypogonadism, both mouse mutant strains have a high **bone mass** phenotype. Subsequent analysis of the mechanism leading to this high **bone mass** revealed that this was due to an increase of bone formation. All data collected indicate that, in vivo, **leptin** does not act directly on osteoblasts but rather through a central pathway following binding to its specific receptors located on hypothalamic nuclei. This result revealed that bone remodeling, like most other homeostatic functions, is under a hypothalamic control. The nature of the signal downstream of the hypothalamus is unknown for now but current experiments are attempting to identify it.

L3 ANSWER 13 OF 19 MEDLINE
ACCESSION NUMBER: 2001470836 MEDLINE
DOCUMENT NUMBER: 21407138 PubMed ID: 11515179
TITLE: [**Leptin**: factor in the central nervous system regulation of **bone mass**. Development of a new understanding of bone remodeling, skeletal reconstruction, skeletal preservation and skeletal repair]. **Leptin**: Faktor in der zentralnervosen Regulation der Knochenmasse. Entwicklung eines neuen Verstandnisses von Knochenremodeling, Skelettumbau, Skeletterhaltung und Skelettreparatur.
AUTHOR: Amling M; Schilling A F; Haberland M; Rueger J M
CORPORATE SOURCE: Abteilung fur Unfall- und Wiederherstellungschirurgie, Chirurgische Klinik und Poliklinik, Universitatsklinikum Hamburg-Eppendorf, Martinistrasse 52, 20246 Hamburg.. amling@uke.uni-hamburg.de
SOURCE: ORTHOPADE, (2001 Jul) 30 (7) 418-24.
Journal code: 0331266. ISSN: 0085-4530.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: German
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200110
ENTRY DATE: Entered STN: 20010823
Last Updated on STN: 20011022
Entered Medline: 20011018

AB Bone remodeling is the physiologic process used by vertebrates to maintain a constant **bone mass** between the end of puberty and gonadal failure. Besides the well-characterized and critical local regulation of bone remodeling, recent genetic studies have shown that there is a central control of bone formation, one aspect of bone remodeling. This central regulation involves **leptin**, an adipocyte-secreted hormone that controls body weight, reproduction, and bone remodeling following binding to its receptor located on the hypothalamic nuclei. This genetic result in rodents is in line with clinical observations in humans and offers a whole new direction for research in bone physiology.

L3 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:571304 CAPLUS
DOCUMENT NUMBER: 135:298867
TITLE: Central control of bone formation
AUTHOR(S): Takeda, Shu; Karsenty, Gerard
CORPORATE SOURCE: Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, TX, 77030, USA
SOURCE: Journal of Bone and Mineral Metabolism (2001), 19(3), 195-198
CODEN: JBMME4; ISSN: 0914-8779

PUBLISHER: Springer-Verlag Tokyo
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with refs. Vertebrates constantly remodel bone to maintain a const. **bone mass**. Bone remodeling comprises two phases: bone resorption by the osteoclasts followed by bone formation by the osteoblasts. Although the prevailing view about the control of bone remodeling is that it is an autocrine/paracrine phenomenon, the bone resorption arm of bone remodeling is under a tight endocrine control. To date little is known about the regulation of bone formation. The authors took the observations that gonadal failure favors bone loss and obesity protects from it as an indication that **bone mass**, body wt., and reprodn. could be regulated by the same hormone(s). **Leptin** is one of these hormones. **Leptin** inhibits bone formation by the osteoblasts. This function is dominant, and **leptin** deficiency results in a high **bone mass** phenotype despite the hypogonadism characterizing these animals. Genetic biochem. and physiol. studies demonstrate that **leptin** inhibits bone formation following its binding to its receptor in the hypothalamus. These results are the first evidence that bone remodeling is a hypothalamic process; they imply necessarily that osteoporosis, the most frequent bone remodeling disease, is partly at least a hypothalamic disease. This finding also has therapeutic implications.
REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 15 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2000:403910 BIOSIS
DOCUMENT NUMBER: PREV200000403910
TITLE: Central control of **bone mass** by **leptin** in rats.
AUTHOR(S): Holzmann, T. (1); Schilling, A. F. (1); Beil, T. (1); Rueger, J. M. (1); Karsenty, G.; Amling, M. (1)
CORPORATE SOURCE: (1) Trauma Surgery, Hamburg University, Hamburg Germany
SOURCE: Journal of Bone and Mineral Research, (September, 2000) Vol. 15, No. Suppl. 1, pp. S471. print.
Meeting Info.: Twenty-Second Annual Meeting of the American Society for Bone and Mineral Research Toronto, Ontario, Canada September 22-26, 2000 American Society for Bone and Mineral Research
. ISSN: 0884-0431.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L3 ANSWER 16 OF 19 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 2000415029 MEDLINE
DOCUMENT NUMBER: 20396852 PubMed ID: 10941257
TITLE: **Leptin** and bone: does the brain control bone biology?.
AUTHOR: Fleet J C
CORPORATE SOURCE: University of North Carolina, Greensboro 27412-5001, USA.
SOURCE: NUTRITION REVIEWS, (2000 Jul) 58 (7) 209-11. Ref: 8
Journal code: 0376405. ISSN: 0029-6643.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200008
ENTRY DATE: Entered STN: 20000907
Last Updated on STN: 20000907
Entered Medline: 20000831
AB The means by which obesity leads to high bone density and protects

individuals from osteoporosis is not known. The study of bone biology in two mouse models of obesity, **leptin**-deficient (ob/ob) and **leptin receptor**-deficient (db/db) mice, points to a role for **leptin** in the control of bone density. When **leptin** action is missing in these mice, bone density is high. This is true despite concurrent hypogonadism and hypercortisolism, two strong proresorptive signals that would normally lead to low bone density. Curiously, **leptin** does not have a direct effect on osteoblasts, which suggests the existence of a central, neuroendocrine pathway that controls **bone mass**.

L3 ANSWER 17 OF 19 MEDLINE DUPLICATE 6
ACCESSION NUMBER: 2000123439 MEDLINE
DOCUMENT NUMBER: 20123439 PubMed ID: 10660043
TITLE: **Leptin** inhibits bone formation through a hypothalamic relay: a central control of **bone mass**.
AUTHOR: Ducy P; Amling M; Takeda S; Priemel M; Schilling A F; Beil F T; Shen J; Vinson C; Rueger J M; Karsenty G
CORPORATE SOURCE: Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, Texas 77030, USA.
CONTRACT NUMBER: AR45548 (NIAMS)
DE11290 (NIDCR)
SOURCE: CELL, (2000 Jan 21) 100 (2) 197-207.
Journal code: 0413066. ISSN: 0092-8674.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Space Life Sciences
ENTRY MONTH: 200002
ENTRY DATE: Entered STN: 20000229
Last Updated on STN: 20000229
Entered Medline: 20000214

AB Gonadal failure induces bone loss while obesity prevents it. This raises the possibility that **bone mass**, body weight, and gonadal function are regulated by common pathways. To test this hypothesis, we studied **leptin**-deficient and **leptin receptor**-deficient mice that are obese and hypogonadic. Both mutant mice have an increased bone formation leading to high **bone mass** despite hypogonadism and hypercortisolism. This phenotype is dominant, independent of the presence of fat, and specific for the absence of **leptin** signaling. There is no **leptin** signaling in osteoblasts but intracerebroventricular infusion of **leptin** causes bone loss in **leptin**-deficient and wild-type mice. This study identifies **leptin** as a potent inhibitor of bone formation acting through the central nervous system and therefore describes the central nature of **bone mass** control and its disorders.

L3 ANSWER 18 OF 19 MEDLINE DUPLICATE 7
ACCESSION NUMBER: 2001057370 MEDLINE
DOCUMENT NUMBER: 20481995 PubMed ID: 11024568
TITLE: **Leptin** is a potent stimulator of bone growth in ob/ob mice.
AUTHOR: Steppan C M; Crawford D T; Chidsey-Frink K L; Ke H; Swick A G
CORPORATE SOURCE: Department of Metabolic Diseases, Pfizer Central Research, Eastern Point Road, 06340, Groton, CT, USA.
SOURCE: REGULATORY PEPTIDES, (2000 Aug 25) 92 (1-3) 73-8.
Journal code: 8100479. ISSN: 0167-0115.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200012
ENTRY DATE: Entered STN: 20010322

Last Updated on STN: 20010322
Entered Medline: 20001220

AB **Leptin**, the product of the obese gene, is a circulating hormone secreted primarily from adipocytes. The lack of **leptin** in ob/ob mice, who are homozygous for the obese gene, results in hyperglycemia, hyperinsulinemia, hyperphagia, obesity, infertility, decreased brain size and decreased stature. To this end, we investigated the role of **leptin** as a hormonal regulator of bone growth. **Leptin** administration led to a significant increase in femoral length, total body bone area, bone mineral content and bone density in ob/ob mice as compared to vehicle treated controls. The increase in total body **bone mass** was a result of an increase in both trabecular and cortical **bone mass**. These results suggest that the decreased stature of the ob/ob mouse is due to a developmental defect that is readily reversible upon **leptin** administration. Our demonstration that the signalling or long form (Ob-Rb) of the **leptin receptor** is present in both primary adult osteoblasts and chondrocytes suggests that the growth promoting effects of **leptin** could be direct. In summary, these results indicate a novel role for **leptin** in skeletal bone growth and development.

L3 ANSWER 19 OF 19 MEDLINE DUPLICATE 8
ACCESSION NUMBER: 1999196133 MEDLINE
DOCUMENT NUMBER: 99196133 PubMed ID: 10098497
TITLE: **Leptin** acts on human marrow stromal cells to enhance differentiation to osteoblasts and to inhibit differentiation to adipocytes.
AUTHOR: Thomas T; Gori F; Khosla S; Jensen M D; Burguera B; Riggs B L
CORPORATE SOURCE: Endocrine Research Unit, Mayo Clinic and Mayo Foundation, Rochester, Minnesota 55905, USA.
CONTRACT NUMBER: AG-04875 (NIA)
DK-40484 (NIDDK)
DK-45343 (NIDDK)
+
SOURCE: ENDOCRINOLOGY, (1999 Apr) 140 (4) 1630-8.
Journal code: 0375040. ISSN: 0013-7227.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199904
ENTRY DATE: Entered STN: 19990426
Last Updated on STN: 20000303
Entered Medline: 19990415

AB Both **bone mass** and serum **leptin** levels are increased in obesity. Because osteoblasts and adipocytes arise from a common precursor in bone marrow, we assessed the effects of human recombinant **leptin** on a conditionally immortalized human marrow stromal cell line, hMS2-12, with the potential to differentiate to either the osteoblast or adipocyte phenotypes. By RT-PCR and Western immunoblot analysis, the hMS2-12 cells expressed messenger RNA (mRNA) and protein for the **leptin receptor**. **Leptin** did not affect hMS2-12 cell proliferation, but resulted in dose- and time-dependent increases in mRNA and protein levels of alkaline phosphatase, type I collagen, and osteocalcin, and in a 59% increase in mineralized matrix. **Leptin** increased mRNA levels of lipoprotein lipase at 3 days, but decreased mRNA levels of adipsin and **leptin** at 9 days and decreased lipid droplet formation by 50%. **Leptin** did not affect the expression of Cbfa1 or peroxisome proliferator-activated receptor-gamma2, transcription factors involved in commitment to the osteoblast and adipocyte pathways, respectively. Thus, **leptin** acts on human marrow stromal cells to enhance osteoblast differentiation and to inhibit adipocyte differentiation. Our data support the hypothesis that **leptin** is a previously unrecognized, physiological

regulator of these two differentiation pathways, acting primarily on maturation of stromal cells into both lineages.

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=> s ob and obr
L4          125 OB AND OBR

=> s l4 and screen?
L5           35 L4 AND SCREEN?

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6           25 DUP REM L5 (10 DUPLICATES REMOVED)

=> d l6 ibib abs tot

L6   ANSWER 1 OF 25  CAPLUS  COPYRIGHT 2003 ACS        DUPLICATE 1
ACCESSION NUMBER:         2003:35373  CAPLUS
TITLE:                    Ob receptor
INVENTOR(S):              Tartaglia, Louis A.; Tepper, Robert I.; Culpepper,
                          Janice A.
PATENT ASSIGNEE(S):       Millennium Pharmaceuticals, Inc., USA
SOURCE:                   U.S., 75 pp., Cont.-in-part of U.S. Ser. No. 570,142,
                          abandoned.
                          CODEN: USXXAM
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   6
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     US 6506877         B1   20030114       US 1995-583153   19951228
     US 6509189         B1   20030121       US 1995-570142   19951211
     US 5972621         A    19991026       US 1996-599455   19960122
     US 6482927         B1   20021119       US 1996-708123   19960903
     CA 2238569         AA   19970605       CA 1996-2238569  19961127
     WO 9719952         A1   19970605       WO 1996-US19128  19961127
         W:  AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK,
             EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR,
             LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU,
             SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ,
             BY, KG, KZ, MD, RU, TJ, TM
         RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
             IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,
             MR, NE, SN, TD, TG
     AU 9711269         A1   19970619       AU 1997-11269    19961127
     AU 721492          B2   20000706
     CN 1211255         A    19990317       CN 1996-199796   19961127
     EP 1019432         A1   20000719       EP 1996-942110   19961127
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI
     JP 2001501444      T2   20010206       JP 1997-520719   19961127
     US 6395498         B1   20020528       US 1997-864564   19970528
     US 6287782         B1   20010911       US 1998-69781    19980429
     MX 9804158         A    20000331       MX 1998-4158     19980526
     US 6403552         B1   20020611       US 1998-94410    19980609
     US 6380363         B1   20020430       US 1998-137132   19980819
     US 2002182676      A1   20021205       US 2002-79625    20020219
PRIORITY APPLN. INFO.:                  US 1995-562663   B2 19951127
                                        US 1995-566622   B2 19951204
                                        US 1995-569485   B2 19951208
                                        US 1995-570142   B2 19951211
                                        US 1995-583153   A2 19951228
                                        US 1996-599455   A2 19960122
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US 1996-638524 A2 19960426
US 1996-708123 A 19960903
WO 1996-US19128 W 19961127
US 1997-864564 A2 19970528

AB The present invention relates to the discovery, identification and characterization of nucleotides that encode **Ob** receptor (**ObR**), a receptor protein that participates in mammalian body wt. regulation. The invention encompasses **obR** nucleotides, host cell expression systems, **ObR** proteins, fusion proteins, polypeptides and peptides, antibodies to the receptor, transgenic animals that express an **obR** transgene, or recombinant knock-out animals that do not express the **ObR**, antagonists and agonists of the receptor, and other compds. that modulate **obR** gene expression or **ObR** activity that can be used for diagnosis, drug **screening**, clin. trial monitoring, and/or the treatment of body wt. disorders, including but not limited to obesity, cachexia and anorexia.

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 25 USPATFULL

ACCESSION NUMBER: 2003:20138 USPATFULL

TITLE: Nucleic acid molecules encoding the cytoplasmic domain of human **Ob** receptor

INVENTOR(S): Tartaglia, Louis Anthony, Cambridge, MA, United States
Tepper, Robert I., Weston, MA, United States
Culpepper, Janice A., Brookline, MA, United States

PATENT ASSIGNEE(S): Millennium Pharmaceuticals, Inc., Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6509189	B1	20030121
APPLICATION INFO.:	US 1995-570142		19951211 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1995-569485, filed on 8 Dec 1995, now abandoned Continuation-in-part of Ser. No. US 1995-566622, filed on 4 Dec 1995, now abandoned Continuation-in-part of Ser. No. US 1995-562663, filed on 27 Nov 1995, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Spector, Lorraine
ASSISTANT EXAMINER: O'Hara, Eileen B.
LEGAL REPRESENTATIVE: Millennium Pharmaceuticals, Inc.
NUMBER OF CLAIMS: 7
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 11 Drawing Figure(s); 11 Drawing Page(s)
LINE COUNT: 3367

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The presention invention relates to the discovery, identification and characterization of nucleotides that encode **Ob** receptor (**ObR**), a receptor protein that participates in mammalian body weight regulation. The invention encompasses **obR** nucleotides, host cell expression systems, **ObR** proteins, fusion proteins, polypeptides and peptides, antibodies to the receptor, transgenic animals that express an **obR** transgene, or recombinant knock-out animals that do not express the **ObR**, antagonists and agonists of the receptor, and other compounds that modulate **obR** gene expression or **ObR** activity that can be used for diagnosis, drug **screening**, clinical trial monitoring, and/or the treatment of body weight disorders, including but not limited to obesity, cachexia and anorexia.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 3 OF 25 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 2
ACCESSION NUMBER: 2002:889215 CAPLUS
DOCUMENT NUMBER: 137:380053
TITLE: Chimeric proteins comprising the extracellular domain of murine **Ob** receptor and constant region of an immunoglobulin
INVENTOR(S): Tartaglia, Louis A.; Tepper, Robert I.; Culpepper, Janice A.; White, David W.
PATENT ASSIGNEE(S): Millennium Pharmaceuticals, Inc., USA
SOURCE: U.S., 106 pp., Cont.-in-part of U.S. Ser. No. 638,524.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6482927	B1	20021119	US 1996-708123	19960903
US 6509189	B1	20030121	US 1995-570142	19951211
US 6506877	B1	20030114	US 1995-583153	19951228
US 5972621	A	19991026	US 1996-599455	19960122
CA 2238569	AA	19970605	CA 1996-2238569	19961127
WO 9719952	A1	19970605	WO 1996-US19128	19961127
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9711269	A1	19970619	AU 1997-11269	19961127
AU 721492	B2	20000706		
CN 1211255	A	19990317	CN 1996-199796	19961127
EP 1019432	A1	20000719	EP 1996-942110	19961127
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001501444	T2	20010206	JP 1997-520719	19961127
US 6395498	B1	20020528	US 1997-864564	19970528
US 6287782	B1	20010911	US 1998-69781	19980429
MX 9804158	A	20000331	MX 1998-4158	19980526
US 6403552	B1	20020611	US 1998-94410	19980609
US 6380363	B1	20020430	US 1998-137132	19980819
US 2002182676	A1	20021205	US 2002-79625	20020219

PRIORITY APPLN. INFO.:

US 1995-562663	B2	19951127
US 1995-566622	B2	19951204
US 1995-569485	B2	19951208
US 1995-570142	A2	19951211
US 1995-583153	A2	19951228
US 1996-599455	A2	19960122
US 1996-638524	A2	19960426
US 1996-708123	A	19960903
WO 1996-US19128	W	19961127
US 1997-864564	A2	19970528

AB The present invention provides protein and cDNA sequences of long and short isoforms of a novel mouse **Ob** receptor (**ObR**), a receptor protein that participates in mammalian body wt. regulation. The invention further relates to the chimeric proteins comprising the extracellular domain of murine **Ob** receptor and const. region of an Ig. The invention encompasses **obR** nucleotides, host cell expression systems, **ObR** proteins, fusion proteins, polypeptides and peptides, antibodies to the receptor, transgenic animals that express an **obR** transgene, or recombinant knock-out animals that do not express the **ObR**, antagonists and agonists of the receptor, and

other compds. that modulate **obR** gene expression or **ObR** activity that can be used for diagnosis, drug **screening**, clin. trial monitoring, and/or the treatment of body wt. disorders, including but not limited to obesity, cachexia and anorexia.

REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 25 USPATFULL DUPLICATE 3

ACCESSION NUMBER: 2002:136964 USPATFULL

TITLE: **Ob** receptor and methods for the diagnosis and treatment of body weight disorders

INVENTOR(S): Tartaglia, Louis A., Watertown, MA, United States
Tepper, Robert I., Weston, MA, United States
Culpepper, Janice A., Brookline, MA, United States
White, David W., Holbrook, MA, United States

PATENT ASSIGNEE(S): Millenium Pharmaceuticals, Inc., Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6403552	B1	20020611
APPLICATION INFO.:	US 1998-94410		19980609 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1997-864564, filed on 28 May 1997 Continuation-in-part of Ser. No. US 1996-708123, filed on 3 Sep 1996 Continuation-in-part of Ser. No. US 1996-638524, filed on 26 Apr 1996 Continuation-in-part of Ser. No. US 1996-599455, filed on 22 Jan 1996, now patented, Pat. No. US 5972621 Continuation-in-part of Ser. No. US 1995-583153, filed on 28 Dec 1995 Continuation-in-part of Ser. No. US 1995-570142, filed on 11 Dec 1995 Continuation-in-part of Ser. No. US 1995-569485, filed on 8 Dec 1995, now abandoned Continuation-in-part of Ser. No. US 1995-566622, filed on 4 Dec 1995, now abandoned Continuation-in-part of Ser. No. US 1995-562663, filed on 27 Nov 1995, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Ulm, John
LEGAL REPRESENTATIVE: Fish & Richardson, P.C.
NUMBER OF CLAIMS: 41
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 40 Drawing Figure(s); 34 Drawing Page(s)
LINE COUNT: 6353
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to the discovery, identification and characterization of nucleotides that encode **Ob** receptor (**ObR**), a receptor protein that participates in mammalian body weight regulation. The invention encompasses **obR** nucleotides, host cell expression systems, **ObR** proteins, fusion proteins, polypeptides and peptides, antibodies to the receptor, transgenic animals that express an **obR** transgene, or recombinant knock-out animals that do not express the **ObR**, antagonists and agonists of the receptor, and other compounds that modulate **obR** gene expression or **ObR** activity that can be used for diagnosis, drug **screening**, clinical trial monitoring, and/or the treatment of body weight disorders, including but not limited to obesity, cachexia and anorexia.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 5 OF 25 USPATFULL DUPLICATE 4

ACCESSION NUMBER: 2002:122446 USPATFULL

TITLE: Methods of identifying compounds that modulate body weight using the **OB** receptor

INVENTOR(S): Tartaglia, Louis A., Watertown, MA, United States
Tepper, Robert I., Weston, MA, United States
Culpepper, Janice A., Brookline, MA, United States
White, David W., Holbrook, MA, United States
PATENT ASSIGNEE(S): Millennium Pharmaceuticals, Inc., Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6395498	B1	20020528
APPLICATION INFO.:	US 1997-864564		19970528 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1996-708123, filed on 3 Sep 1996 Continuation-in-part of Ser. No. US 1996-638524, filed on 26 Apr 1996 Continuation-in-part of Ser. No. US 1996-599455, filed on 22 Jan 1996, now patented, Pat. No. US 5972621 Continuation-in-part of Ser. No. US 1995-583153, filed on 28 Dec 1995 Continuation-in-part of Ser. No. US 1995-570142, filed on 11 Dec 1995 Continuation-in-part of Ser. No. US 1995-569485, filed on 8 Dec 1995, now abandoned Continuation-in-part of Ser. No. US 1995-566622, filed on 4 Dec 1995, now abandoned Continuation-in-part of Ser. No. US 1995-562663, filed on 27 Nov 1995, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Ulm, John
LEGAL REPRESENTATIVE: Fish & Richardson, P.C.
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 40 Drawing Figure(s); 34 Drawing Page(s)
LINE COUNT: 6476
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to the discovery, identification and characterization of nucleotides that encode **Ob** receptor (**ObR**), a receptor protein that participates in mammalian body weight regulation. The invention encompasses **obR** nucleotides, host cell expression systems, **ObR** proteins, fusion proteins, polypeptides and peptides, antibodies to the receptor, transgenic animals that express an **obR** transgene, or recombinant knock-out animals that do not express the **ObR**, antagonists and agonists of the receptor, and other compounds that modulate **obR** gene expression or **ObR** activity that can be used for diagnosis, drug **screening**, clinical trial monitoring, and/or the treatment of body weight disorders, including but not limited to obesity, cachexia and anorexia.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 6 OF 25 USPATFULL DUPLICATE 5
ACCESSION NUMBER: 2002:95935 USPATFULL
TITLE: Antibodies to the **Ob** receptor
INVENTOR(S): Tartaglia, Louis A., 104 Coolidge Hill Rd., Apt. 6, Watertown, MA, United States 02172
Tepper, Robert I., 53 Laurel Rd., Weston, MA, United States 02193
Culpepper, Janice A., 1734 Beacon St., Brookline, MA, United States 02146
White, David W., 393 Pine St., Holbrook, MA, United States 02343

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6380363	B1	20020430
APPLICATION INFO.:	US 1998-137132		19980819 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1997-864564, filed on 28 May 1997 Continuation-in-part of Ser. No. US 1996-708123, filed on 3 Sep 1996 Continuation-in-part of Ser. No. US 1996-638524, filed on 26 Apr 1996 Continuation-in-part of Ser. No. US 1996-599455, filed on 22 Jan 1996, now patented, Pat. No. US 5972621 Continuation-in-part of Ser. No. US 1995-583153, filed on 28 Dec 1995 Continuation-in-part of Ser. No. US 1995-570142, filed on 11 Dec 1995 Continuation-in-part of Ser. No. US 1995-569485, filed on 8 Dec 1995, now abandoned Continuation-in-part of Ser. No. US 1995-566622, filed on 4 Dec 1995, now abandoned Continuation-in-part of Ser. No. US 1995-562663, filed on 27 Nov 1995, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Spector, Lorraine
ASSISTANT EXAMINER: O'Hara, Eileen B.
NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 40 Drawing Figure(s); 34 Drawing Page(s)
LINE COUNT: 6254
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to the discovery, identification and characterization of nucleotides that encode **Ob** receptor (**ObR**), a receptor protein that participates in mammalian body weight regulation. The invention encompasses **obR** nucleotides, host cell expression systems, **ObR** proteins, fusion proteins, polypeptides and peptides, antibodies to the receptor, transgenic animals that express an **obR** transgene, or recombinant knock-out animals that do not express the **ObR**, antagonists and agonists of the receptor, and other compounds that modulate **obR** gene expression or **ObR** activity that can be used for diagnosis, drug **screening**, clinical trial monitoring, and/or the treatment of body weight disorders, including but not limited to obesity, cachexia and anorexia.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 7 OF 25 USPATFULL
ACCESSION NUMBER: 2002:322512 USPATFULL
TITLE: **Ob** receptor and methods for the diagnosis and treatment of body weight disorders, including obesity and cachexia
INVENTOR(S): Tartaglia, Louis A., Watertown, MA, UNITED STATES
Tepper, Robert I., Weston, MA, UNITED STATES
Culpepper, Janice A., Brookline, MA, UNITED STATES
White, David W., Holbrook, MA, UNITED STATES
PATENT ASSIGNEE(S): Millennium Pharmaceuticals, Inc., a Delaware corporation (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002182676	A1	20021205
APPLICATION INFO.:	US 2002-79625	A1	20020219 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 1997-864564, filed on 28 May 1997, GRANTED, Pat. No. US 6395498 Continuation-in-part of Ser. No. US 1996-708123, filed on 3 Sep 1996, PENDING Continuation-in-part of Ser. No. US 1996-638524, filed on 26 Apr 1996, PENDING Continuation-in-part of Ser. No. US 1996-599455, filed on 22 Jan 1996, GRANTED, Pat. No. US 5972621 Continuation-in-part of Ser. No. US 1995-583153, filed on 28 Dec 1995, PENDING Continuation-in-part of Ser. No. US 1995-570142, filed on 11 Dec 1995, PENDING

Continuation-in-part of Ser. No. US 1995-569485, filed on 8 Dec 1995, ABANDONED Continuation-in-part of Ser. No. US 1995-566622, filed on 4 Dec 1995, ABANDONED Continuation-in-part of Ser. No. US 1995-562663, filed on 27 Nov 1995, ABANDONED

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ANITA L. MEIKLEJOHN, PH.D., Fish & Richardson P.C., 225 Franklin Street, Boston, MA, 02110-2804
NUMBER OF CLAIMS: 72
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 33 Drawing Page(s)
LINE COUNT: 6575
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to the discovery, identification and characterization of nucleotides that encode **Ob** receptor (**ObR**), a receptor protein that participates in mammalian body weight regulation. The invention encompasses **obR** nucleotides, host cell expression systems, **ObR** proteins, fusion proteins, polypeptides and peptides, antibodies to the receptor, transgenic animals that express an **obR** transgene, or recombinant knock-out animals that do not express the **ObR**, antagonists and agonists of the receptor, and other compounds that modulate **obR** gene expression or **ObR** activity that can be used for diagnosis, drug **screening**, clinical trial monitoring, and/or the treatment of body weight disorders, including but not limited to obesity, cachexia and anorexia.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 8 OF 25 USPATFULL
ACCESSION NUMBER: 2002:287154 USPATFULL
TITLE: Receptor derived peptides as modulators of receptor activity
INVENTOR(S): Olsson, Lennart, Mountain View, CA, UNITED STATES
Naranda, Tatjana, Mountain View, CANADA

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002160013	A1	20021031
APPLICATION INFO.:	US 2001-991548	A1	20011120 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1998-28937, filed on 24 Feb 1998, GRANTED, Pat. No. US 6333031 Continuation of Ser. No. US 1997-788820, filed on 23 Jan 1997, GRANTED, Pat. No. US 6346390 Continuation of Ser. No. US 1996-701382, filed on 22 Aug 1996, GRANTED, Pat. No. US 6004758 Continuation of Ser. No. US 1996-612999, filed on 8 Mar 1996, GRANTED, Pat. No. US 5952293
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MORRISON & FOERSTER LLP, 755 PAGE MILL RD, PALO ALTO, CA, 94304-1018
NUMBER OF CLAIMS: 36
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 20 Drawing Page(s)
LINE COUNT: 2231
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Oligopeptides having an amino acid sequence corresponding to a receptor's extracellular domain, and having sequence similarity to regulatory peptides from MHC class I antigens, enhance or replace the physiological response of ligand binding to the corresponding receptor. The oligopeptides are used in diagnosis and therapy of diseases that involve inadequate or inappropriate receptor response as well as in the **screening** of drug candidates that affect surface expression of receptors. Also useful for drug **screening** is a modified

receptor molecule, where the sequence corresponding to the regulatory peptide is modified or deleted.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 9 OF 25 USPATFULL
ACCESSION NUMBER: 2002:221377 USPATFULL
TITLE: Leptin induced genes
INVENTOR(S): White, David, Holbrook, MA, UNITED STATES
Zhou, Jianghong, Chestnut Hill, MA, UNITED STATES
Tartaglia, Louis A., Newton, MA, UNITED STATES
PATENT ASSIGNEE(S): Millennium Pharmaceuticals, Inc., Delaware corporation (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002119517	A1	20020829
APPLICATION INFO.:	US 2001-804006	A1	20010312 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1999-292228, filed on 15 Apr 1999, ABANDONED Continuation-in-part of Ser. No. US 1998-195896, filed on 19 Nov 1998, ABANDONED Continuation-in-part of Ser. No. US 1998-150857, filed on 10 Sep 1998, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-106378P	19981029 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ANITA L. MEIKLEJOHN, PH.D., Fish & Richardson P.C., 225 Franklin Street, Boston, MA, 02110-2804
NUMBER OF CLAIMS: 39
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 16 Drawing Page(s)
LINE COUNT: 3742
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Six genes whose expression is induced by leptin are disclosed (LIG46; LIG56; Tgtp, encoding a T cell-specific GTP-binding protein; LRG-47, encoding an interferon (IFN) inducible protein; RC10-II, encoding a subunit of a 20S brain proteasome; and Stra13, encoding a retinoic acid inducible protein). These six leptin-inducible genes and the proteins they encode represent targets for the development of therapeutic agents for use in modulating body weight. For example, agents that alter the expression or activity of one or more of the leptin-induced proteins can be used to modulate body weight. Such agents can be identified using cellular, in vitro, or in vivo assays which monitor the expression or activity of one or more of the six leptin-induced proteins. Potentially useful therapeutic agents can also be identified through the use of assays designed to identify agents that bind to one of the leptin-induced proteins. The leptin-induced genes of the invention and the proteins they encode may themselves be useful therapeutically and diagnostically.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 10 OF 25 USPATFULL
ACCESSION NUMBER: 2002:120021 USPATFULL
TITLE: Method for making multispecific antibodies having heteromultimeric and common components
INVENTOR(S): Arathoon, W. Robert, San Mateo, CA, UNITED STATES
Carter, Paul J., San Francisco, CA, UNITED STATES
Merchant, Anne M., San Bruno, CA, UNITED STATES
Presta, Leonard G., San Francisco, CA, UNITED STATES
PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002062010	A1	20020523
APPLICATION INFO.:	US 2001-863693	A1	20010523 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1998-70166, filed on 30 Apr 1998, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-46816P	19970502 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: GENENTECH, INC., 1 DNA WAY, SOUTH SAN FRANCISCO, CA, 94080
NUMBER OF CLAIMS: 29
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 7 Drawing Page(s)
LINE COUNT: 3173
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a method of preparing heteromultimeric polypeptides such as bispecific antibodies, bispecific immunoadhesins and antibody-immunoadhesin chimeras. The invention also relates to the heteromultimers prepared using the method. Generally, the method provides a multispecific antibody having a common light chain associated with each heteromeric polypeptide having an antibody binding domain. Additionally the method futher involves introducing into the multispecific antibody a specific and complementary interaction at the interface of a first polypeptide and the interface of a second polypeptide, so as to promote heteromultimer formation and hinder homomultimer formation; and/or a free thiol-containing residue at the interface of a first polypeptide and a corresponding free thiol-containing residue in the interface of a second polypeptide, such that a non-naturally occurring disulfide bond is formed between the first and second polypeptide. The method allows for the enhanced formation of the desired heteromultimer relative to undesired heteromultimers and homomultimers.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 11 OF 25 USPATFULL
ACCESSION NUMBER: 2002:22114 USPATFULL
TITLE: Assay systems for leptin-enhancing agents
INVENTOR(S): Carpenter, Laura R., Tuckahoe, NY, UNITED STATES
Stahl, Neil, Carmel, NY, UNITED STATES
Yancopoulos, George D., Yorktown Heights, NY, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002012949	A1	20020131
APPLICATION INFO.:	US 2001-894039	A1	20010628 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1998-93814, filed on 9 Jun 1998, GRANTED, Pat. No. US 6270981

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-49108P	19970609 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Joseph M. Sorrentino, Regeneron Pharmaceuticals, Inc., 777 Old Saw Mill River Road, Tarrytown, NY, 10591
NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Page(s)
LINE COUNT: 993

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to methods for identifying therapeutic agents that enhance the effect of leptin, an adipocyte-derived cytokine that regulates food intake and body weight. The invention further provides for use of agents identified using this assay system to enhance the interaction between leptin and its receptor, **OB**-R, thereby boosting leptin's weight-reducing effects in obese individuals.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 12 OF 25 USPATFULL

ACCESSION NUMBER: 2002:254172 USPATFULL

TITLE: Leptin receptor gene as a genetic marker for leanness in pigs

INVENTOR(S): Rothschild, Max F., Ames, IA, United States
Vincent, Amy L., Jewel, IA, United States
Ernst, Catherine W., East Lansing, MI, United States

PATENT ASSIGNEE(S): Iowa State University Research Foundation, Ames, IA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6458531	B1	20021001	
APPLICATION INFO.:	US 1997-946800		19971008	(8)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1996-28100P	19961009 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Siew, Jeffrey
LEGAL REPRESENTATIVE: McKee, Voorhees & Sease, P.L.C.
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 931
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed herein are genetic markers for pig leanness, methods for identifying such markers, and methods of **screening** pigs to determine those more or less likely to be obese and more or less likely to produce litters with leans or obese offspring and preferably selecting those pigs for future breeding purposes. The markers are based upon the presence or absence of certain polymorphisms in the pig leptin receptor gene.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 13 OF 25 USPATFULL

ACCESSION NUMBER: 2002:1082 USPATFULL

TITLE: Incorporation of phosphorylation sites

INVENTOR(S): Inglese, James, Dayton, NJ, United States
Glickman, Joseph Fraser, Garwood, NJ, United States

PATENT ASSIGNEE(S): Pharmacopeia, Inc., Cranbury, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6335176	B1	20020101	
APPLICATION INFO.:	US 1998-174216		19981016	(9)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Russel, Jeffrey E.
LEGAL REPRESENTATIVE: Heslin Rothenberg Farley & Mesiti P.C.
NUMBER OF CLAIMS: 16
EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 26 Drawing Figure(s); 12 Drawing Page(s)
LINE COUNT: 1088
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A reagent is described for incorporating phosphorylation sites into compounds, particularly into proteins and peptides. The reagent has the structure

A--B--C

wherein A is a moiety that is specifically reactive with a reactive side chain in the compound, B is a linking moiety, and C is a peptide sequence that contains a kinase substrate.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 14 OF 25 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 6
ACCESSION NUMBER: 2001:668271 CAPLUS
DOCUMENT NUMBER: 135:251930
TITLE: Methods of using the **Ob** receptor to identify therapeutic compounds
INVENTOR(S): Tartaglia, Louis A.; Tepper, Robert I.; Culpepper, Janice A.; White, David W.
PATENT ASSIGNEE(S): Millennium Pharmaceuticals, Inc., USA
SOURCE: U.S., 109 pp., Cont.-in-part of *U.S. Ser. No.* 864,564.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6287782	B1	20010911	US 1998-69781	19980429
US 6509189	B1	20030121	US 1995-570142	19951211
US 6506877	B1	20030114	US 1995-583153	19951228
US 5972621	A	19991026	US 1996-599455	19960122
US 6482927	B1	20021119	US 1996-708123	19960903
US 6395498	B1	20020528	US 1997-864564	19970528

PRIORITY APPLN. INFO.:
US 1995-562663 B2 19951127
US 1995-566622 B2 19951204
US 1995-569485 B2 19951208
US 1995-570142 A2 19951211
US 1995-583153 A2 19951228
US 1996-599455 A2 19960122
US 1996-638524 A2 19960426
US 1996-708123 A2 19960903
US 1997-864564 A2 19970528

AB The present invention relates to the discovery, identification and characterization of nucleotides that encode **Ob** receptor (**ObR**), a receptor protein that participates in mammalian body wt. regulation. The *invention encompasses* ***obR*** nucleotides, host cell expression systems, **ObR** proteins, fusion proteins, polypeptides and peptides, antibodies to the receptor, transgenic animals that express an **obR** transgene, or recombinant knock-out animals that do not express the **ObR**, antagonists and agonists of the receptor, and other compds. that modulate **obR** gene expression or **ObR** activity that can be used for diagnosis, drug **screening**, clin. trial monitoring, and/or the treatment of body wt. disorders, including but not limited to obesity, cachexia and anorexia.
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 15 OF 25 USPATFULL
ACCESSION NUMBER: 2001:165598 USPATFULL

TITLE: Leptin induced genes
INVENTOR(S): White, David, Holbrook, MA, United States
Zhou, Jianghong, Chestnut Hill, MA, United States
Tartaglia, Louis A., Watertown, MA, United States
PATENT ASSIGNEE(S): Millennium Pharmaceuticals, Inc., a Delaware corporation (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001024808	A1	20010927
APPLICATION INFO.:	US 2001-804357	A1	20010312 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1998-195896, filed on 19 Nov 1998, ABANDONED Continuation-in-part of Ser. No. US 1998-150857, filed on 10 Sep 1998, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-106378P	19981029 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ANITA L. MEIKLEJOHN, PH.D., Fish & Richardson P.C., 225 Franklin Street, Boston, MA, 02110-2804
NUMBER OF CLAIMS: 39
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 16 Drawing Page(s)
LINE COUNT: 3077
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Six genes whose expression is induced by leptin are disclosed (LIG46; LIG56; Tgtp, encoding a T cell-specific GTP-binding protein; LRG-47, encoding an interferon (IFN) inducible protein; RC10-II, encoding a subunit of a 20S brain proteasome; and Stra13, encoding a retinoic acid inducible protein). These six leptin-inducible genes and the proteins they encode represent targets for the development of therapeutic agents for use in modulating body weight. For example, agents that alter the expression or activity of one or more of the leptin-induced proteins can be used to modulate body weight. Such agents can be identified using cellular, in vitro, or in vivo assays which monitor the expression or activity of one or more of the six leptin-induced proteins Potentially useful therapeutic agents can also be identified through the use of assays designed to identify agents that bind to one of the leptin-induced proteins. The leptin-induced genes of the invention and the proteins they encode may themselves be useful therapeutically and diagnostically.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 16 OF 25 USPATFULL
ACCESSION NUMBER: 2001:114233 USPATFULL
TITLE: Fast accessible dynamic type semiconductor memory device
INVENTOR(S): Ooishi, Tsukasa, Hyogo, Japan
PATENT ASSIGNEE(S): Mitsubishi Denki Kabushiki Kaisha, Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001008498	A1	20010719
	US 6381191	B2	20020430
APPLICATION INFO.:	US 2001-756126	A1	20010109 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1999-316086, filed on 20 May 1999, PENDING Continuation of Ser. No. US 1998-124230, filed on 29 Jul 1998, PENDING Division of Ser. No. US 1996-674596, filed on 27 Jun 1996, GRANTED, Pat. No. US 5835436

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1995-167358	19950703

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: McDERMOTT, WILL & EMERY, 600 13th Street, N.W., Washington, DC, 20005-3096
NUMBER OF CLAIMS: 61
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 77 Drawing Page(s)
LINE COUNT: 5906
AB Respective ones of a plurality of memory array blocks are rendered drivable independently of each other under control of an array activation control circuit. When data is read from one array block under control of the array activation control circuit, the data can be transferred to another array block by selecting and coupling a column in the other array block to a global I/O bus.

L6 ANSWER 17 OF 25 USPATFULL
ACCESSION NUMBER: 2001:234974 USPATFULL
TITLE: Receptor derived peptides as modulators of receptor activity
INVENTOR(S): Olsson, Lennart, Orinda, CA, United States
Naranda, Tatjana, Mountain View, CA, United States
PATENT ASSIGNEE(S): Reception, Inc., Mountain View, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6333031	B1	20011225
APPLICATION INFO.:	US 1998-28937		19980224 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1997-788820, filed on 23 Jan 1997 Continuation of Ser. No. US 1996-701382, filed on 22 Aug 1996, now patented, Pat. No. US 6004758 Continuation of Ser. No. US 1996-612999, filed on 8 Mar 1996, now patented, Pat. No. US 5952293
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Chan, Christina Y.
ASSISTANT EXAMINER: DiBrino, Marianne
LEGAL REPRESENTATIVE: Rowland, Bertram I.
NUMBER OF CLAIMS: 12
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 20 Drawing Figure(s); 20 Drawing Page(s)
LINE COUNT: 1909
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Oligopeptides having an amino acid sequence corresponding to a receptor's extracellular domain, and having sequence similarity to regulatory peptides from MHC class I antigens, enhance or replace the physiological response of ligand binding to the corresponding receptor. The oligopeptides are used in diagnosis and therapy of diseases that involve inadequate or inappropriate receptor response as well as in the **screening** of drug candidates that affect surface expression of receptors. Also useful for drug **screening** is a modified receptor molecule, where the sequence corresponding to the regulatory peptide is modified or deleted.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 18 OF 25 USPATFULL
ACCESSION NUMBER: 2001:125754 USPATFULL
TITLE: Methods of **screening** competitors of **OB**-R binding to SHP-2-SH2 peptides
INVENTOR(S): Carpenter, Laura R., Tuckahoe, NY, United States

Stahl, Neil, Carmel, NY, United States
Yancopoulos, George D., Yorktown Heights, NY, United States
PATENT ASSIGNEE(S): Regeneron Pharmaceuticals, Inc., Tarrytown, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6270981	B1	20010807
APPLICATION INFO.:	US 1998-93814		19980609 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Kunz, Gary L.
ASSISTANT EXAMINER: Landsman, Robert S.
LEGAL REPRESENTATIVE: Palladino, Linda O., Kempler, Gail M.
NUMBER OF CLAIMS: 5
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 24 Drawing Figure(s); 12 Drawing Page(s)
LINE COUNT: 968
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to methods for identifying therapeutic agents that enhance the effect of leptin, an adipocyte-derived cytokine that regulates food intake and body weight. The invention further provides for use of agents identified using this assay system to enhance the interaction between leptin and its receptor, **OB**-R, thereby boosting leptin's weight-reducing effects in obese individuals.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 19 OF 25 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 7
ACCESSION NUMBER: 1999:686607 CAPLUS
DOCUMENT NUMBER: 131:318589
TITLE: Human and murine isoforms of the **Ob** receptor and their use in methods of identifying compounds that modulate body weight
INVENTOR(S): Tartaglia, Louis A.; Tepper, Robert I.; Culpepper, Janice A.
PATENT ASSIGNEE(S): Millennium Pharmaceuticals, Inc., USA
SOURCE: U.S., 88 pp., Cont.-in-part of U.S. Ser. No. 583,153.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5972621	A	19991026	US 1996-599455	19960122
US 6509189	B1	20030121	US 1995-570142	19951211
US 6506877	B1	20030114	US 1995-583153	19951228
US 6482927	B1	20021119	US 1996-708123	19960903
CA 2238569	AA	19970605	CA 1996-2238569	19961127
WO 9719952	A1	19970605	WO 1996-US19128	19961127
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9711269	A1	19970619	AU 1997-11269	19961127
AU 721492	B2	20000706		
CN 1211255	A	19990317	CN 1996-199796	19961127
EP 1019432	A1	20000719	EP 1996-942110	19961127

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

JP 2001501444	T2	20010206	JP 1997-520719	19961127
US 6395498	B1	20020528	US 1997-864564	19970528
US 6287782	B1	20010911	US 1998-69781	19980429
MX 9804158	A	20000331	MX 1998-4158	19980526
US 6403552	B1	20020611	US 1998-94410	19980609
US 6380363	B1	20020430	US 1998-137132	19980819
US 2002182676	A1	20021205	US 2002-79625	20020219

PRIORITY APPLN. INFO.:

US 1995-562663	A2	19951127
US 1995-566622	A2	19951204
US 1995-569485	A2	19951208
US 1995-570142	A2	19951211
US 1995-583153	A2	19951228
US 1996-599455	A2	19960122
US 1996-638524	A2	19960426
US 1996-708123	A	19960903
WO 1996-US19128	W	19961127
US 1997-864564	A2	19970528

AB The present invention relates to the discovery, identification and characterization of nucleotides that encode **Ob** receptor (**ObR**), a receptor protein that participates in mammalian body wt. regulation. Murine **obR** cDNA was identified using an alk. phosphatase/**Ob** fusion protein to **screen** an expression library of cDNAs synthesized from murine choroid plexus mRNA and transiently transfected into mammalian COS cells. A clone, famj5312, expressing the short form of a high affinity receptor for **Ob** was identified and sequenced. Sequence anal. revealed that the **obR** cDNA and predicted amino acid sequence are novel sequences contg. amino acid regions indicating that **ObR** is a member of the Class I family of receptor proteins. Mapping studies demonstrate that the **obR** gene maps to the db locus, and that the db gene is a mutant **obR** gene which expresses an aberrantly spliced **obR** long form message that encodes a protein identical to the short form murine **ObR**. The famj5312 sequence was utilized to **screen** a human fetal brain cDNA library, which resulted in the identification of a human **obR** cDNA clone fahj5312d, and oligonucleotide primers designed on the basis of the human cDNA sequence were used to clone the human genomic DNA. The mRNA encoding the murine long form of **ObR** was cloned from murine hypothalamus using degenerate primers designed on the human **ObR** cytoplasmic domain. The invention encompasses **obR** nucleotides, host cell expression systems, **ObR** proteins, fusion proteins, polypeptides and peptides, antibodies to the receptor, transgenic animals that express an **obR** transgene, or recombinant knock-out animals that do not express the **ObR**, antagonists and agonists of the receptor, and other compds. that modulate **obR** gene expression or **ObR** activity that can be used for diagnosis, drug **screening**, clin. trial monitoring, and/or the treatment of body wt. disorders, including but not limited to obesity, cachexia and anorexia.

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:457155 CAPLUS
DOCUMENT NUMBER: 127:90511
TITLE: Mouse and human **Ob** receptors, DNA sequences, and diagnosis and treatment of body weight disorders
INVENTOR(S): Tartaglia, Louis A.; Tepper, Robert I.; Culpepper, Janice A.; et al.
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 260 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9719952	A1	19970605	WO 1996-US19128	19961127
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6509189	B1	20030121	US 1995-570142	19951211
US 6506877	B1	20030114	US 1995-583153	19951228
US 5972621	A	19991026	US 1996-599455	19960122
US 6482927	B1	20021119	US 1996-708123	19960903
AU 9711269	A1	19970619	AU 1997-11269	19961127
AU 721492	B2	20000706		
BR 9612102	A	19990223	BR 1996-12102	19961127
EP 1019432	A1	20000719	EP 1996-942110	19961127
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001501444	T2	20010206	JP 1997-520719	19961127
MX 9804158	A	20000331	MX 1998-4158	19980526

PRIORITY APPLN. INFO.:

US 1995-562663	A	19951127
US 1995-566622	A	19951204
US 1995-569485	A	19951208
US 1995-570142	A	19951211
US 1995-583153	A	19951228
US 1996-599455	A	19960122
US 1996-638524	A	19960426
US 1996-708123	A	19960903
WO 1996-US19128	W	19961127

AB The present invention relates to the discovery, identification and characterization of nucleotides that encode **Ob** receptor (**ObR**), a receptor protein that participates in mammalian body weigh regulation. The invention encompasses **obR** nucleotides, host cell expression systems, **ObR** proteins, fusion proteins, polypeptides and peptides, antibodies to the receptor, transgenic animals that express an **obR** transgene, or recombinant knock-out animals that do not express the **ObR**, antagonists and agonists of the receptor, and other compds. that modulate **obR** gene expression or **ObR** activity that can be used for diagnosis, drug **screening**, clin. trial monitoring, and/or the treatment of body wt. disorders, including but not limited to obesity, cachexia and anorexia. Examples include mouse and human **Ob** receptors and nucleic acid sequences encoding them. Also, IgG1 fusion protein is recombinantly expressed. The mouse gene is mapped to mouse chromosome 4 and identified as the same as gene db.

L6 ANSWER 21 OF 25 USPATFULL

ACCESSION NUMBER: 95:4649 USPATFULL
TITLE: Interface: interrupt masking with logical sum and product options
INVENTOR(S): Adams, Matthew K., Dallas, TX, United States
Little, Wendell L., Denton, TX, United States
Grider, Stephen N., Farmers Branch, TX, United States
PATENT ASSIGNEE(S): Dallas Semiconductor Corporation, Dallas, TX, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5381540		19950110

APPLICATION INFO.: US 1992-985513 19921202 (7)
RELATED APPLN. INFO.: Continuation of Ser. No. US 1990-567365, filed on 13 Aug 1990, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Dixon, Joseph L.
ASSISTANT EXAMINER: Elmore, Reba I.
LEGAL REPRESENTATIVE: Worsham, Forsythe, Sampels & Wooldridge
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 5
NUMBER OF DRAWINGS: 54 Drawing Figure(s); 50 Drawing Page(s)
LINE COUNT: 2616

AB Interrupt circuitry for a processor comprises a plurality of interrupt inputs, an interrupt output, combinatorial logic with a plurality of combinatorial logic inputs connected to the plurality of interrupt inputs and with a combinatorial logic output connected to the interrupt output wherein an interrupt output signal at the interrupt output is a function of interrupt signals at the plurality of interrupt inputs; and an interrupt mode select connected to the combinatorial logic wherein an interrupt mode select signal from the interrupt mode select controls the function. The interrupt mode select signal from the interrupt mode select selects the function to be either AND or OR. The circuitry also comprises a mask register having a plurality of mask register inputs and a plurality of mask register outputs, the plurality of mask register inputs connected to the plurality of interrupt inputs and the plurality of mask register outputs connected to the plurality of combinatorial logic inputs wherein a mask register bit pattern in the mask register conditions a corresponding subset (possibly empty) of the interrupt signals at the plurality of interrupt inputs to make the function and the interrupt output signal at the interrupt output not depend upon the corresponding subset.

L6 ANSWER 22 OF 25 USPATFULL
ACCESSION NUMBER: 93:15127 USPATFULL
TITLE: Dual function microboard with a row of connectors on two edges
INVENTOR(S): Bolan, Michael L., Dallas, TX, United States
Little, Wendell L., Denton, TX, United States
Jansen, Elaine, Flower Mound, TX, United States
Folkes, Don, Coppell, TX, United States
PATENT ASSIGNEE(S): Dallas Semiconductor Corporation, Dallas, TX, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5189598		19930223
APPLICATION INFO.:	US 1990-567467		19900814 (7)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Picard, Leo P.
ASSISTANT EXAMINER: Sparks, Donald A.
LEGAL REPRESENTATIVE: Worsham, Forsythe, Sampels & Wooldridge
NUMBER OF CLAIMS: 1
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 54 Drawing Figure(s); 50 Drawing Page(s)
LINE COUNT: 2316

AB An innovative microboard package, which includes not only a row of edge connector contacts along one long edge thereof, but also includes another row of edge connector contacts along the other long edge. The contacts are connected so that the functionality of the board can be changed merely by choosing one of the two orientations for insertion. For example, one embodiment provides a microprocessor module if insertion is done in one direction, and a microcontroller module if insertion in the other direction. Optionally, the row of contacts which

is not inserted into the mother board can be connected to a jumper cable, using a simple connector header.

L6 ANSWER 23 OF 25 USPATFULL
ACCESSION NUMBER: 92:68425 USPATFULL
TITLE: Filtered detection plus propagated timing window for stabilizing the switch from crystal to ring oscillator at power-down
INVENTOR(S): Grider, Stephen N., Farmers Branch, TX, United States
PATENT ASSIGNEE(S): Dallas Semiconductor Corporation, Dallas, TX, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5140197		19920818	
APPLICATION INFO.:	US 1990-567359		19900813	(7)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Mis, David
LEGAL REPRESENTATIVE: Worsham, Forsythe, Sampels & Wooldridge
NUMBER OF CLAIMS: 1
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 54 Drawing Figure(s); 50 Drawing Page(s)
LINE COUNT: 2341
AB An adjunct chip, usable as a peripheral to a microprocessor, which detects power failure, and puts the microprocessor into a known state upon power down. In order to reliably and stably put the microprocessor into a known state, several clocks are generated after the reset signal. However, since the power supply is failing, it is possible that the crystal-controlled oscillator may already have become unreliable. Therefore, a simple logic circuit (a ring oscillator, in the presently preferred embodiment) is used to generate the needed additional clocks at power-down. In the presently preferred embodiment, the switch from crystal-controlled oscillator to ring oscillator is stabilized by using a nonlinear filter circuit (driven by both the ring oscillator and the crystal oscillator) to detect when the crystal oscillator actually begins to fail. A transmission gate is then disabled, and the state frozen for long enough to allow any changes to propagate through.

L6 ANSWER 24 OF 25 USPATFULL
ACCESSION NUMBER: 92:23434 USPATFULL
TITLE: Frequency-independent monitor circuit
INVENTOR(S): Adams, Matthew K., Dallas, TX, United States
PATENT ASSIGNEE(S): Dallas Semiconductor Corporation, Dallas, TX, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5099153		19920324	
APPLICATION INFO.:	US 1990-567397		19900813	(7)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Mis, David
LEGAL REPRESENTATIVE: Worsham, Forsythe, Sampels & Wooldridge
NUMBER OF CLAIMS: 1
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 49 Drawing Figure(s); 50 Drawing Page(s)
LINE COUNT: 2345
AB A clock monitor circuit which is frequency-independent. The crystal terminals on a circuit being monitored for activity may be considered as an inverter combined with a phase delay. The innovative circuit has clock-output and clock-input terminals which are connected to the clock terminals on the circuit being monitored. When a rising edge appears on

the clock-output terminal, the clock-input line is sampled: if the circuit being monitored is properly active, the level on the clock-input line will be high. Similarly, when a falling edge appears on the clock-output terminal, the clock-input line is sampled: if the circuit being monitored is properly active, the level on the clock-input line will be low. Whenever a low level is detected on a rising edge, or a high level on a falling edge, a counter chain will start counting down. The counter chain will be reset only when a high level is detected on a rising edge AND a low level is detected on the next falling edge. Thus, when the circuit being monitored becomes inactive, the counter chain will start to count down, and will eventually reach zero and generate a watchdog interrupt or reset.

L6 ANSWER 25 OF 25 USPATFULL

ACCESSION NUMBER:	92:21251 USPATFULL
TITLE:	Latched multiplexer for stabilizing the switch crystal to ring oscillator at power-down
INVENTOR(S):	Adams, Matthew K., Dallas, TX, United States
PATENT ASSIGNEE(S):	Dallas Semiconductor Corporation, Dallas, TX, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5097154		19920317	
APPLICATION INFO.:	US 1990-567437		19900813	(7)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Mis, David
LEGAL REPRESENTATIVE:	Worsham, Forsythe, Sampels & Wooldridge
NUMBER OF CLAIMS:	1
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	54 Drawing Figure(s); 50 Drawing Page(s)
LINE COUNT:	2340

AB An adjunct chip, usable as a peripheral to a microprocessor, which detects power failure, and which puts the microprocessor into a known state upon power down. In order to reliably and stably put the microprocessor into a known state, several clocks are generated after the reset signal. However, since the power supply is falling, it is possible that the crystal-controlled oscillator may already have become unreliable. Therefore, a simple logic circuit (a ring oscillator, in the presently preferred embodiment) is used to generate the needed additional clocks at power-down. The switch from crystal-controlled oscillator to ring oscillator is stabilized by using a latched multiplexer to switch between the two oscillator inputs. The latch adds hysteresis to the switching characteristic, avoiding any problems of switching jitter.

=>
=> d history

(FILE 'HOME' ENTERED AT 20:44:49 ON 22 JAN 2003)

FILE 'MEDLINE, CAPLUS, LIFESCI, EMBASE, USPATFULL, BIOSIS' ENTERED AT 20:45:05 ON 22 JAN 2003

```
L1          4265 S LEPTIN AND LEPTIN RECEPTOR
L2            41 S L1 AND BONE MASS
L3            19 DUP REM L2 (22 DUPLICATES REMOVED)
L4           125 S OB AND OBR
L5            35 S L4 AND SCREEN?
L6            25 DUP REM L5 (10 DUPLICATES REMOVED)
```

=> s l4 and bone mass

```
L7            0 L4 AND BONE MASS

=> s l4 and bone
L8            3 L4 AND BONE

=> dup rem l8
PROCESSING COMPLETED FOR L8
L9            3 DUP REM L8 (0 DUPLICATES REMOVED)

=> d l9 ibib abs tot

L9   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2002:180969  CAPLUS
DOCUMENT NUMBER:          136:226789
TITLE:                    Methods for using the obese gene and its gene product
                          leptin to stimulate hematopoietic development and
                          therapeutic uses thereof
INVENTOR(S):              Snodgrass, H. Ralph; Cioffi, Joseph; Zupancic, Thomas
                          Joel; Shafer, Alan Wayne
PATENT ASSIGNEE(S):       Progenitor, Inc., USA
SOURCE:                   U.S., 58 pp., Cont.-in-part of U.S. Ser. No. 589,915,
                          abandoned.
                          CODEN: USXXAM
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   12
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     US 6355237         B1   20020312       US 1996-618957   19960320
     US 5643748         A    19970701       US 1994-306231   19940914
     US 5763211         A    19980609       US 1994-355888   19941214
     CA 2244693         AA   19970731       CA 1997-2244693  19970121
     WO 9727286         A1   19970731       WO 1997-US767    19970121
         W:  AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, HU,
             IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN,
             MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, UZ, VN,
             AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
             IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,
             MR, NE, SN, TD, TG
     AU 9718311         A1   19970820       AU 1997-18311    19970121
     AU 731685          B2   20010405
     EP 892849          A1   19990127       EP 1997-903840   19970121
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI
     JP 2001510982      T2   20010807       JP 1997-526921   19970121
     US 2002197232      A1   20021226       US 2002-95929    20020312
PRIORITY APPLN. INFO.:                  US 1994-306231   A2 19940914
                                        US 1994-355888   A2 19941214
                                        US 1996-589915   B2 19960123
                                        US 1996-618957   A  19960320
                                        US 1996-713296   A  19960913
                                        WO 1997-US767    W  19970121
AB   The present invention provides methods for using Hu-B1.219 (or OB
     -R) variants as markers for the identification and isolation of progenitor
     cells in the hematopoietic and endothelial lineages, and methods for using
     the obese gene and its gene product, leptin, to stimulate hematopoietic
     and endothelial development.  The invention is based the discovery of
     three forms of a novel member of the HR family, designated Hu-B1.219,
     which have been isolated from a human fetal liver cDNA library.  Sequence
     comparison of these mols. with a human OB-R sequence shows that
     they are nearly identical in their extracellular domains.  While the three
     isoforms described herein differ from the reported OB-R protein
```

at only three amino acid positions in the extracellular domain, all four variants contain extensive differences in their intracellular domains at their 3' ends. Therefore, these four mols. represent variant forms of the receptor that respond to leptin as a ligand. An addnl. variant form of this receptor has been detected in brain cells and shown to bind to the obese gene product, leptin. Therefore, leptin may be used to stimulate the growth and development of receptor-pos. hematopoietic and endothelial cells in vitro and in vivo. In addn., this receptor is selectively expressed in hematopoietic progenitor cells with long-term repopulating potential. Thus, although these receptors bind to leptin, they may transduce different signals upon ligand binding. Hu-B1.219 is expressed in several cell lines of hematopoietic and endothelial origin. Tissue expression anal. demonstrates that fetal lung and liver also contain high levels of its mRNA. A wide variety of uses are encompassed in the present invention, including the use of Hu-B1.219-specific binding agents to identify and isolate hematopoietic and endothelial progenitor cells, the use of leptin to activate such progenitor cells for in vitro or ex vivo expansion, the use of leptin for in vivo stimulation of the same cell population in patients with immunodeficiency and anemia, and the use of leptin to promote angiogenesis and vasculogenesis, as well as augmentation of donor cell engraftment following **bone** marrow transplantation. Thus, agents that specifically bind to this receptor may be used to identify and isolate progenitor cells for a variety of clin. applications.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 3 USPATFULL

ACCESSION NUMBER: 2002:120021 USPATFULL

TITLE: Method for making multispecific antibodies having heteromultimeric and common components

INVENTOR(S): Arathoon, W. Robert, San Mateo, CA, UNITED STATES
Carter, Paul J., San Francisco, CA, UNITED STATES
Merchant, Anne M., San Bruno, CA, UNITED STATES
Presta, Leonard G., San Francisco, CA, UNITED STATES

PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002062010	A1	20020523
APPLICATION INFO.:	US 2001-863693	A1	20010523 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1998-70166, filed on 30 Apr 1998, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-46816P	19970502 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: GENENTECH, INC., 1 DNA WAY, SOUTH SAN FRANCISCO, CA, 94080
NUMBER OF CLAIMS: 29
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 7 Drawing Page(s)
LINE COUNT: 3173
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a method of preparing heteromultimeric polypeptides such as bispecific antibodies, bispecific immunoadhesins and antibody-immunoadhesin chimeras. The invention also relates to the heteromultimers prepared using the method. Generally, the method provides a multispecific antibody having a common light chain associated with each heteromeric polypeptide having an antibody binding domain. Additionally the method futher involves introducing into the multispecific antibody a specific and complementary interaction at the interface of a first polypeptide and the interface of a second polypeptide, so as to promote heteromultimer formation and hinder

homomultimer formation; and/or a free thiol-containing residue at the interface of a first polypeptide and a corresponding free thiol-containing residue in the interface of a second polypeptide, such that a non-naturally occurring disulfide bond is formed between the first and second polypeptide. The method allows for the enhanced formation of the desired heteromultimer relative to undesired heteromultimers and homomultimers.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 3 OF 3 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1999:166917 BIOSIS
DOCUMENT NUMBER: PREV199900166917
TITLE: Splice variants of the **OB** receptor gene are differentially expressed brain and peripheral tissue of mice.
AUTHOR(S): Chen, Shu-Cheng; Kochan, Jarema P.; Campfield, L. Arthur; Burn, Paul; Smeyne, Richard J.
CORPORATE SOURCE: Dep. Metabolic Dis., Hoffmann-La Roche Inc., Nutley, NJ 07110 USA
SOURCE: Journal of Receptor and Signal Transduction Research, (Jan.-July, 1999) Vol. 19, No. 1-4, pp. 245-266. ISSN: 1079-9893.
DOCUMENT TYPE: Article
LANGUAGE: English
AB A high affinity receptor for **OB** protein was recently cloned from the choroid plexus of mice. At least six alternatively spliced forms of the **OB** receptor (**OBR**) gene have been described, all of which encode proteins containing the **OB**-R extracellular domain. One splice variant encodes a receptor with a long intracellular domain, **OB**-RL, that has been implicated in **OB**-R signaling. Here, we have used in situ hybridization to examine the localization of **OB**-R splice variants in brain and peripheral tissues of adult and newborn mice. Using a probe hybridizing with all known splice variants, we confirmed that **OB**-R mRNA was widely distributed in the adult tissues. In the CNS, choroid plexus was the major site of expression. We now demonstrate that **OB**-R mRNA is expressed in peripheral tissues; primarily associated with connective tissues. In addition, **OBR** mRNA was detected at higher levels in peripheral tissues of newborn mice than in adult mice. With a probe specific for **OB** -RL, we confirmed that high mRNA expression was detected in hypothalamic nuclei, while low levels were observed in choroid plexus. We now report that in peripheral tissues of adult mice, **OB**-RL mRNA expression was either very low or undetectable. In newborn mice, the pattern of **OB**-RL message expression in the CNS was similar to that of adult mice, while **bone** was the site of highest **OB**-RL message expression in the peripheral tissue. These data suggest different biological roles for **OB**-R splice variants encoding the short and long forms of **OB**-R. The localization of **OB**-RL to hypothalamic nuclei supports the idea that **OB**-RL is the brain receptor that mediates **OB** protein signaling and actions. In addition, the expression of **OB**-R message in newborn mice also suggests a biological role of **OB**-R during development in mice.

```
=> e Karsenty ?/au
E1            2     KARSENTI R/AU
E2            1     KARSENTRY G/AU
E3            0 --> KARSENTY ?/AU
E4            2     KARSENTY A/AU
E5            5     KARSENTY ALAIN/AU
E6            2     KARSENTY ANNA/AU
E7           11     KARSENTY B/AU
E8            1     KARSENTY BERNARD/AU
E9           46     KARSENTY C/AU
```

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E10           1     KARSENTY C K/AU
E11           3     KARSENTY CL/AU
E12           3     KARSENTY CLAUDE/AU

=> e Karsenty g?/au
E1            7     KARSENTY G */AU
E2            1     KARSENTY G GREATER THAN OR EQUAL TO/AU
E3            0 --> KARSENTY G?/AU
E4            1     KARSENTY GABRIEL/AU
E5            1     KARSENTY GERALD/AU
E6          204     KARSENTY GERARD/AU
E7           12     KARSENTY H/AU
E8            5     KARSENTY HERVE/AU
E9            1     KARSENTY J/AU
E10           2     KARSENTY J C/AU
E11           2     KARSENTY J M/AU
E12           1     KARSENTY JOSY C/AU

=> s e1 or e5 or e6
L10         212 "KARSENTY G *"/AU OR "KARSENTY GERALD"/AU OR "KARSENTY GERARD"/A
                U

=> s l10 and leptin or bone or ob
L11     1280861 L10 AND LEPTIN OR BONE OR OB

=> s l10 and (leptin or bone or ob)
L12         127 L10 AND (LEPTIN OR BONE OR OB)

=> s l10 and (leptin or ob)
L13          17 L10 AND (LEPTIN OR OB)

=> dup rem l17
L17 IS NOT VALID HERE
The L-number entered has not been defined in this session, or it
has been deleted.  To see the L-numbers currently defined in this
session, enter DISPLAY HISTORY at an arrow prompt (=>).

=> dup rem l13
PROCESSING COMPLETED FOR L13
L14           12 DUP REM L13 (5 DUPLICATES REMOVED)

=> d l14 ibib abs tot

L14  ANSWER 1 OF 12     MEDLINE                          DUPLICATE 1
ACCESSION NUMBER:   2002659585     MEDLINE
DOCUMENT NUMBER:    22306907   PubMed ID: 12419242
TITLE:              Leptin regulates bone formation via the
                    sympathetic nervous system.
AUTHOR:             Takeda Shu; Elefteriou Florent; Levasseur Regis; Liu
                    Xiuyun; Zhao Liping; Parker Keith L; Armstrong Dawna; Ducy
                    Patricia; Karsenty Gerard
CORPORATE SOURCE:   Department of Molecular and Human Genetics, One Baylor
                    Plaza, Houston, TX 77030, USA.
CONTRACT NUMBER:    DK54480 (NIDDK)
     DK58883 (NIDDK)
     HD24054 (NICHD)
SOURCE:             CELL, (2002 Nov 1) 111 (3) 305-17.
                    Journal code: 0413066. ISSN: 0092-8674.
                    (Investigators: Karsenty G, Baylor Coll Med, Houston, TX)
PUB. COUNTRY:       United States
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       Priority Journals; Space Life Sciences
ENTRY MONTH:        200212
ENTRY DATE:         Entered STN: 20021107
```

Last Updated on STN: 20030116
Entered Medline: 20021218

AB We previously showed that **leptin** inhibits bone formation by an undefined mechanism. Here, we show that hypothalamic **leptin** -dependent antiosteogenic and anorexigenic networks differ, and that the peripheral mediators of **leptin** antiosteogenic function appear to be neuronal. Neuropeptides mediating **leptin** anorexigenic function do not affect bone formation. **Leptin** deficiency results in low sympathetic tone, and genetic or pharmacological ablation of *adrenergic signaling* leads to a **leptin**-resistant high bone mass. beta-adrenergic receptors on osteoblasts regulate their proliferation, and a beta-adrenergic agonist decreases bone mass in **leptin** -deficient and wild-type mice while a beta-adrenergic antagonist increases bone mass in wild-type and ovariectomized mice. None of these manipulations affects body weight. This study demonstrates a **leptin**-dependent neuronal regulation of bone formation with potential therapeutic implications for osteoporosis.

L14 ANSWER 2 OF 12 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:199633 BIOSIS
DOCUMENT NUMBER: PREV200100199633
TITLE: **Leptin** controls bone formation through a hypothalamic relay.
AUTHOR(S): **Karsenty, Gerard (1)**
CORPORATE SOURCE: (1) Baylor College of Medicine, One Baylor Plaza, Houston, TX, 77030 USA
SOURCE: Means, Anthony R.. Recent Progress in Hormone Research, (2001) Vol. 56, pp. 401-415. Recent Progress in Hormone Research. print.
Publisher: Endocrine Society 4350 East West Highway, Suite 500, Bethesda, MD, 20814-4410, USA.
ISSN: 0079-9963. ISBN: 0-879225-41-7 (cloth).
DOCUMENT TYPE: Book
LANGUAGE: English
SUMMARY LANGUAGE: English

L14 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:367510 CAPLUS
DOCUMENT NUMBER: 135:120353
TITLE: Editorial: the not-so-odd couple-the clinician and the experimentalist
AUTHOR(S): **Karsenty, Gerard**
CORPORATE SOURCE: Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, TX, 77030, USA
SOURCE: Journal of Clinical Endocrinology and Metabolism (2001), 86(5), 1882-1883
CODEN: JCEMAZ; ISSN: 0021-972X
PUBLISHER: Endocrine Society
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review with 8 refs. is given, concerning the role of **leptin** in the control of bone mass of nonobese people. The study of Pasco et al. is discussed to serve as example of the usefulness of the dialogue between clin. medicine and animal experimentation and synergy between clin. and mol. investigations. Correlation was shown of blood serum **leptin** , to a certain extent, with the bone mass of nonobese women when using a noninvasive method to measure bone mass, which was in agreement with the observation that **leptin**-deficient mice have a high bone mass phenotype before they become obese. Long-term goal of exploration of the role of **leptin** on bone remodeling leading to a novel bone-forming therapeutic for osteoporosis is discussed.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 4 OF 12 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

ACCESSION NUMBER: 2002:213295 BIOSIS
DOCUMENT NUMBER: PREV200200213295
TITLE: [**Leptin** controls bone formation through a hypothalamic relay.
Original Title: Controle central de la formation osseuse..
AUTHOR(S): **Karsenty, Gerard (1)**
CORPORATE SOURCE: (1) Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Place, Houston, TX, 77030: karsenty@bcm.tmc.edu USA
SOURCE: M-S (Medecine Sciences), (Decembre, 2001) Vol. 17, No. 12, pp. 1270-1275. print.
ISSN: 0767-0974.
DOCUMENT TYPE: Article
LANGUAGE: French
AB Menopause favors osteoporosis and obesity protects from it. In an attempt to decipher the molecular bases of these two well-known clinical observations, we hypothesized that they meant that bone remodeling, body weight, and reproduction are controlled by identical endocrine pathways. We used mouse genetics as a tool to translate these clinical observations into a molecular hypothesis. The **ob/ob** and db/db mice were valuable models, since two of the three functions thought to be co-regulated are affected in these mice: they are obese and hypogonadic. Surprisingly, given their hypogonadism, both mouse mutant strains have a high bone mass phenotype. Subsequent analysis of the mechanism leading to this high bone mass revealed that this was due to an increase of bone formation. All data collected indicate that, in vivo, **leptin** does not act directly on osteoblasts but rather through a central pathway following binding to its specific receptors located on hypothalamic nuclei. This result revealed that bone remodeling, like most other homeostatic functions, is under a hypothalamic control. The nature of the signal downstream of the hypothalamus is unknown for now but current experiments are attempting to identify it.

L14 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:601527 CAPLUS
DOCUMENT NUMBER: 135:339333
TITLE: Central control of bone formation by **leptin**
AUTHOR(S): Takeda, Shu; **Karsenty, Gerard**
CORPORATE SOURCE: Department of Molecular and Human Genetics, Baylor College of Medicine, USA
SOURCE: Jikken Igaku (2001), 19(10), 1199-1202
CODEN: JIIGEF; ISSN: 0288-5514
PUBLISHER: Yodosha
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review with refs., on hormone regulation of bone metab., **leptin**, a hormone in sex gland function, wt., and mass regulation; and mechanism of action of **leptin** on chondroblasts.

L14 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:209704 CAPLUS
DOCUMENT NUMBER: 134:290460
TITLE: **Leptin** controls bone formation through a hypothalamic relay
AUTHOR(S): **Karsenty, Gerard**
CORPORATE SOURCE: Baylor College of Medicine, Baylor Plaza, Houston, TX, 77030, USA
SOURCE: Recent Progress in Hormone Research (2001), 56, 401-415
CODEN: RPHRA6; ISSN: 0079-9963
PUBLISHER: Endocrine Society
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 54 refs. Menopause favors osteoporosis and obesity protects from it. In an attempt to decipher the mol. bases of these two well-known

clin. observations, the authors hypothesized that they meant that bone remodeling, body wt., and reprodn. are controlled by identical endocrine pathways. The authors used mouse genetics as a tool to translate these clin. observations into a mol. hypothesis. The **ob/ob** and db/db mice were valuable models, since two of the three functions thought to be co-regulated are affected in these mice: they are obese and hypogonadic. Surprisingly, given their hypogonadism, both mouse mutant strains have a high bone mass phenotype. Subsequent anal. of the mechanism leading to this high bone mass revealed that it was due to an increase of bone formation. All data collected indicate that, in vivo, **leptin** does not act directly on osteoblasts but rather through a central pathway following binding to its specific receptors located on hypothalamic nuclei. This result revealed that bone remodeling, like most other homeostatic functions, is under hypothalamic control. The nature of the signal downstream of the hypothalamus is unknown but current expts. are attempting to identify it.

REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:571304 CAPLUS
DOCUMENT NUMBER: 135:298867
TITLE: Central control of bone formation
AUTHOR(S): Takeda, Shu; **Karsenty, Gerard**
CORPORATE SOURCE: Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, TX, 77030, USA
SOURCE: Journal of Bone and Mineral Metabolism (2001), 19(3), 195-198
CODEN: JBMME4; ISSN: 0914-8779
PUBLISHER: Springer-Verlag Tokyo
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review with refs. Vertebrates constantly remodel bone to maintain a const. bone mass. Bone remodeling comprises two phases: bone resorption by the osteoclasts followed by bone formation by the osteoblasts. Although the prevailing view about the control of bone remodeling is that it is an autocrine/paracrine phenomenon, the bone resorption arm of bone remodeling is under a tight endocrine control. To date little is known about the regulation of bone formation. The authors took the observations that gonadal failure favors bone loss and obesity protects from it as an indication that bone mass, body wt., and reprodn. could be regulated by the same hormone(s). **Leptin** is one of these hormones. **Leptin** inhibits bone formation by the osteoblasts. This function is dominant, and **leptin** deficiency results in a high bone mass phenotype despite the hypogonadism characterizing these animals. Genetic biochem. and physiol. studies demonstrate that **leptin** inhibits bone formation following its binding to its receptor in the hypothalamus. These results are the first evidence that bone remodeling is a hypothalamic process; they imply necessarily that osteoporosis, the most frequent bone remodeling disease, is partly at least a hypothalamic disease. This finding also has therapeutic implications.

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:900489 CAPLUS
DOCUMENT NUMBER: 134:51366
TITLE: Methods and compositions for control of bone formation via modulation of **leptin** activity
INVENTOR(S): **Karsenty, Gerard**; Ducy, Patricia; Amling, Michael
PATENT ASSIGNEE(S): Baylor College of Medicine, USA
SOURCE: PCT Int. Appl., 142 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000076552	A1	20001221	WO 2000-US15911	20000609
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1191945	A1	20020403	EP 2000-941311	20000609
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.:
US 1999-138733P P 19990611
US 2000-489873 A 20000120
US 1999-160441P P 19991010
WO 2000-US15911 W 20000609

AB The invention relates to the method for treatment, diagnosis and prevention of bone disease and comprises methods including inhibiting or increasing **leptin** synthesis, **leptin** receptor synthesis, **leptin** binding to the **leptin** receptor, and **leptin** receptor activity. The invention also relates to screening assays to identify compds. that modulate **leptin** and/or **leptin** receptor activity. The invention further relates to gene therapy methods utilizing **leptin** and **leptin**-related sequences for the treatment and prevention of bone disease.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 2
ACCESSION NUMBER: 2000:626326 CAPLUS
DOCUMENT NUMBER: 133:279126
TITLE: The osteoblast: A sophisticated fibroblast under central surveillance
AUTHOR(S): Ducy, Patricia; Schinke, Thorsten; **Karsenty, Gerard**
CORPORATE SOURCE: Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, TX, 77030, USA
SOURCE: Science (Washington, D. C.) (2000), 289(5484), 1501-1504
CODEN: SCIEAS; ISSN: 0036-8075
PUBLISHER: American Association for the Advancement of Science
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review with 49 refs. The study of the biol. of osteoblasts, or bone-forming cells, illustrates how mammalian genetics has profoundly modified our understanding of cell differentiation and physiol. processes. Indeed, genetic-based studies over the past 5 yr have revealed how osteoblast differentiation is controlled through growth and transcription factors. Likewise, the recent identification, using mutant mouse models, of a central component in the regulation of bone formation expands our understanding of the control of bone remodeling. This regulatory loop, which involves the hormone **leptin**, may help to explain the protective effect of obesity on bone mass in humans. In addn., it provides a novel physiol. concept that may shed light on the etiol. of osteoporosis and help to identify new therapeutic targets.

REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 3
ACCESSION NUMBER: 2001:670199 CAPLUS
DOCUMENT NUMBER: 135:339396
TITLE: A neuro (endo)crine regulation of bone remodeling
AUTHOR(S): Amling, Michael; Takeda, Shu; **Karsenty, Gerard**
CORPORATE SOURCE: Dept. Trauma Surgery, Hamburg University School of

Medicine, Hamburg, Germany
SOURCE: BioEssays (2000), 22(11), 970-975
CODEN: BIOEEJ; ISSN: 0265-9247
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with refs. Bone remodeling is the normal physiol. process that is used by vertebrates to maintain a const. bone mass during the period bracketed by the end of puberty and the onset of gonadal failure in later life. Besides the well-characterized and crit. process of local regulation of bone remodeling, achieved by autocrine and paracrine mechanisms, recent genetic studies have shown that there is a central control of bone formation, mediated by a neuroendocrine mechanism. This central regulation involves **leptin**, an adipocyte-secreted hormone that controls body wt., reprodn. and bone remodeling, and which binds to and exerts its effect through the cells of the hypothalamic nuclei in the brain. This genetic result in mice is in line with clin. observations in humans and generates a whole new direction of research in bone physiol.
REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 11 OF 12 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:55225 BIOSIS
DOCUMENT NUMBER: PREV200100055225
TITLE: The central regulation of bone remodeling.
AUTHOR(S): **Karsenty, Gerard (1)**
CORPORATE SOURCE: (1) Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX, 77030: karsenty@bcm.tmc.edu USA
SOURCE: Trends in Endocrinology and Metabolism, (December, 2000) Vol. 11, No. 10, pp. 437-439. print.
ISSN: 1043-2760.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB For a long time bone remodeling has been thought to be mainly an autocrine-paracrine phenomenon. Yet bone resorption mechanisms are under the control of hormones, suggesting that the same might be true for bone formation. The recent development of molecular endocrinology uncovers a common, central regulation of bone formation, body weight and reproduction mediated by **leptin**.

L14 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 4
ACCESSION NUMBER: 2000:81421 CAPLUS
DOCUMENT NUMBER: 132:203588
TITLE: **Leptin** inhibits bone formation through a hypothalamic relay: a central control of bone mass
AUTHOR(S): Ducy, Patricia; Amling, Michael; Takeda, Shu; Priemel, Matthias; Schilling, Arndt F.; Beil, Frank T.; Shen, Jianhe; Vinson, Charles; Rueger, Johannes M.; **Karsenty, Gerard**
CORPORATE SOURCE: Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, TX, 77030, USA
SOURCE: Cell (Cambridge, Massachusetts) (2000), 100(2), 197-207
CODEN: CELLB5; ISSN: 0092-8674
PUBLISHER: Cell Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Gonadal failure induces bone loss while obesity prevents it. This raises the possibility that bone mass, body wt., and gonadal function are regulated by common pathways. To test this hypothesis, the authors studied **leptin**-deficient and **leptin** receptor-deficient mice that are obese and hypogonadic. Both mutant mice have an increased

bone formation leading to high bone mass despite hypogonadism and hypercortisolism. This phenotype is dominant, independent of the presence of fat, and specific for the absence of **leptin** signaling. There is no **leptin** signaling in osteoblasts but intracerebroventricular infusion of **leptin** causes bone loss in **leptin**-deficient and wild-type mice. This study identifies **leptin** as a potent inhibitor of bone formation acting through the central nervous system and therefore describes the central nature of bone mass control and its disorders.

REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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=> e ducy p?/au
E1            1     DUCY K F/AU
E2           85     DUCY P/AU
E3            0 --> DUCY P?/AU
E4           59     DUCY PATRICIA/AU
E5            2     DUCZ A/AU
E6            1     DUCZ AGNES/AU
E7            2     DUCZ P/AU
E8            1     DUCZ RENE/AU
E9            9     DUCZA E/AU
E10           7     DUCZA ESZTER/AU
E11           1     DUCZA G/AU
E12           2     DUCZA LAJOS/AU

=> s e4
L15          59 "DUCY PATRICIA"/AU

=> s l15 and (leptin)
L16           8 L15 AND (LEPTIN)

=> dup rem l16
PROCESSING COMPLETED FOR L16
L17           4 DUP REM L16 (4 DUPLICATES REMOVED)

=> d l17

L17  ANSWER 1 OF 4     MEDLINE                          DUPLICATE 1
AN   2002659585     MEDLINE
DN   22306907   PubMed ID: 12419242
TI   Leptin regulates bone formation via the sympathetic nervous
     system.
AU   Takeda Shu; Elefteriou Florent; Levasseur Regis; Liu Xiuyun; Zhao Liping;
     Parker Keith L; Armstrong Dawna; Ducy Patricia; Karsenty Gerard
CS   Department of Molecular and Human Genetics, One Baylor Plaza, Houston, TX
     77030, USA.
NC   DK54480 (NIDDK)
     DK58883 (NIDDK)
     HD24054 (NICHD)
SO   CELL, (2002 Nov 1) 111 (3) 305-17.
     Journal code: 0413066. ISSN: 0092-8674.
     (Investigators: Karsenty G, Baylor Coll Med, Houston, TX)
CY   United States
DT   Journal; Article; (JOURNAL ARTICLE)
LA   English
FS   Priority Journals; Space Life Sciences
EM   200212
ED   Entered STN: 20021107
     Last Updated on STN: 20030116
     Entered Medline: 20021218

=> d l17 2-4
```

L17 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 2000:900489 CAPLUS
DN 134:51366
TI Methods and compositions for control of bone formation via modulation of **leptin** activity
IN Karsenty, Gerard; **Ducy, Patricia**; Amling, Michael
PA Baylor College of Medicine, USA
SO PCT Int. Appl., 142 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000076552	A1	20001221	WO 2000-US15911	20000609
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1191945	A1	20020403	EP 2000-941311	20000609
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRAI US 1999-138733P P 19990611
US 2000-489873 A 20000120
US 1999-160441P P 19991010
WO 2000-US15911 W 20000609
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 2
AN 2000:626326 CAPLUS
DN 133:279126
TI The osteoblast: A sophisticated fibroblast under central surveillance
AU **Ducy, Patricia**; Schinke, Thorsten; Karsenty, Gerard
CS Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, TX, 77030, USA
SO Science (Washington, D. C.) (2000), 289(5484), 1501-1504
CODEN: SCIEAS; ISSN: 0036-8075
PB American Association for the Advancement of Science
DT Journal; General Review
LA English
RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 3
AN 2000:81421 CAPLUS
DN 132:203588
TI **Leptin** inhibits bone formation through a hypothalamic relay: a central control of bone mass
AU **Ducy, Patricia**; Amling, Michael; Takeda, Shu; Priemel, Matthias; Schilling, Arndt F.; Beil, Frank T.; Shen, Jianhe; Vinson, Charles; Rueger, Johannes M.; Karsenty, Gerard
CS Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, TX, 77030, USA
SO Cell (Cambridge, Massachusetts) (2000), 100(2), 197-207
CODEN: CELLB5; ISSN: 0092-8674
PB Cell Press
DT Journal
LA English
RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s amling M?/au
L18 226 AMLING M?/AU

=> s l18 and leptin
L19 21 L18 AND LEPTIN

=> dup rem l19
PROCESSING COMPLETED FOR L19
L20 11 DUP REM L19 (10 DUPLICATES REMOVED)

=> d l20 ibib abs tot

L20 ANSWER 1 OF 11 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 2001694216 MEDLINE
DOCUMENT NUMBER: 21606191 PubMed ID: 11741068
TITLE: Brain and bone: central regulation of bone mass. A new paradigm in skeletal biology.
COMMENT: Comment in: J Bone Joint Surg Am. 2001 Dec;83-A(12):1782
AUTHOR: Haberland M; Schilling A F; Rueger J M; **Amling M**
CORPORATE SOURCE: Department of Trauma and Reconstructive Surgery, Hamburg University School of Medicine, Martinistrasse 52, 20246 Hamburg, Germany.
SOURCE: JOURNAL OF BONE AND JOINT SURGERY. AMERICAN VOLUME, (2001 Dec) 83-A (12) 1871-6. Ref: 49
Journal code: 0014030. ISSN: 0021-9355.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200201
ENTRY DATE: Entered STN: 20011217
Last Updated on STN: 20020125
Entered Medline: 20020114

L20 ANSWER 2 OF 11 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2001470836 MEDLINE
DOCUMENT NUMBER: 21407138 PubMed ID: 11515179
TITLE: [**Leptin**: factor in the central nervous system regulation of bone mass. Development of a new understanding of bone remodeling, skeletal reconstruction, skeletal preservation and skeletal repair].
Leptin: Faktor in der zentralnervosen Regulation der Knochenmasse. Entwicklung eines neuen Verstandnisses von Knochenremodeling, Skelettumbau, Skeletterhaltung und Skelettreparatur.
AUTHOR: **Amling M**; Schilling A F; Haberland M; Rueger J M
CORPORATE SOURCE: Abteilung fur Unfall- und Wiederherstellungschirurgie, Chirurgische Klinik und Poliklinik, Universitatsklinikum Hamburg-Eppendorf, Martinistrasse 52, 20246 Hamburg.. amling@uke.uni-hamburg.de
SOURCE: ORTHOPADE, (2001 Jul) 30 (7) 418-24.
Journal code: 0331266. ISSN: 0085-4530.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: German
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200110
ENTRY DATE: Entered STN: 20010823
Last Updated on STN: 20011022
Entered Medline: 20011018
AB Bone remodeling is the physiologic process used by vertebrates to maintain a constant bone mass between the end of puberty and gonadal failure. Besides the well-characterized and critical local regulation of bone remodeling, recent genetic studies have shown that there is a central control of bone formation, one aspect of bone remodeling. This central

regulation involves **leptin**, an adipocyte-secreted hormone that controls body weight, reproduction, and bone remodeling following binding to its receptor located on the hypothalamic nuclei. This genetic result in rodents is in line with clinical observations in humans and offers a whole new direction for research in bone physiology.

L20 ANSWER 3 OF 11 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2001378127 EMBASE
TITLE: Think bone: The novel paradigm of central bone mass control.
AUTHOR: Haberland M.; Schilling A.F.; Rueger J.M.; **Amling M.**
CORPORATE SOURCE: Dr. M. Amling, Department of Trauma Surgery, Hamburg Univ. School of Medicine, Martinistrasse 52, 20246 Hamburg, Germany. amling@uke.uni-hamburg.de
SOURCE: European Journal of Trauma, (2001) 27/5 (218-225).
Refs: 48
ISSN: 1439-0590 CODEN: EJTRFM
COUNTRY: Germany
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 002 Physiology
003 Endocrinology
033 Orthopedic Surgery
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Our understanding of the molecular physiology of the skeleton has been transformed by recent advances in human and mouse genetics and molecular endocrinology. Through the successful convergence of genetics and clinical observation, novel insights marking a breakthrough in the understanding of the molecular physiology of the skeletal system were gained. The paradigm that osteoblast and osteoclast function are mechanistically linked, being dogma in the bone field for decades, is overcome by experimental data showing that the maintenance of the skeletal system is, at least partially, controlled by the hypothalamus. **Leptin** was identified as one key molecule in the central regulation of bone mass, and its importance was demonstrated across several species. Indeed, in vivo **leptin** signaling is able to overcome the deleterious effect of hypercortisolism and hypogonadism on the skeleton. This review presents a perspective on the data supporting the hypothesis of central bone mass control.

L20 ANSWER 4 OF 11 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 2002058325 MEDLINE
DOCUMENT NUMBER: 21641072 PubMed ID: 11783628
TITLE: Central control of bone mass: brainstorming of the skeleton.
AUTHOR: **Amling M**; Pogoda P; Beil F T; Schilling A F; Holzmann T; Priemel M; Blicharski D; Catala-Lehnen P; Rueger J M; Ducy P; Karsenty G
SOURCE: ADVANCES IN EXPERIMENTAL MEDICINE AND BIOLOGY, (2001) 496 85-94. Ref: 44
Journal code: 0121103. ISSN: 0065-2598.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200206
ENTRY DATE: Entered STN: 20020125
Last Updated on STN: 20020618
Entered Medline: 20020617

L20 ANSWER 5 OF 11 MEDLINE
ACCESSION NUMBER: 2000310245 MEDLINE

DOCUMENT NUMBER: 20310245 PubMed ID: 10851696
TITLE: [Osteoporosis. New research results on bone formation]. Osteoporose. Neue Forschungsergebnisse zur Knochenbildung.
AUTHOR: **Amling M**amling@uke.uni-hamburg.de
SOURCE: ORTHOPADE, (2000 Apr) 29 (4) 354-5.
Journal code: 0331266. ISSN: 0085-4530.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: News Announcement
LANGUAGE: German
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200007
ENTRY DATE: Entered STN: 20000810
Last Updated on STN: 20000810
Entered Medline: 20000724

L20 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:900489 CAPLUS
DOCUMENT NUMBER: 134:51366
TITLE: Methods and compositions for control of bone formation via modulation of **leptin** activity
INVENTOR(S): Karsenty, Gerard; Ducy, Patricia; **Amling, Michael**
PATENT ASSIGNEE(S): Baylor College of Medicine, USA
SOURCE: PCT Int. Appl., 142 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000076552	A1	20001221	WO 2000-US15911	20000609
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1191945	A1	20020403	EP 2000-941311	20000609
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: US 1999-138733P P 19990611
US 2000-489873 A 20000120
US 1999-160441P P 19991010
WO 2000-US15911 W 20000609

AB The invention relates to the method for treatment, diagnosis and prevention of bone disease and comprises methods including inhibiting or increasing **leptin** synthesis, **leptin** receptor synthesis, **leptin** binding to the **leptin** receptor, and **leptin** receptor activity. The invention also relates to screening assays to identify compds. that modulate **leptin** and/or **leptin** receptor activity. The invention further relates to gene therapy methods utilizing **leptin** and **leptin**-related sequences for the treatment and prevention of bone disease.
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 7 OF 11 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 2001103867 MEDLINE
DOCUMENT NUMBER: 20511805 PubMed ID: 11056473
TITLE: A neuro (endo)crine regulation of bone remodeling.
AUTHOR: **Amling M**; Takeda S; Karsenty G
CORPORATE SOURCE: Dept. Trauma Surgery, Hamburg University School of Medicine, Hamburg, Germany.
SOURCE: BIOESSAYS, (2000 Nov) 22 (11) 970-5. Ref: 44
Journal code: 8510851. ISSN: 0265-9247.
PUB. COUNTRY: ENGLAND: United Kingdom

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200102
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20010208

AB Bone remodeling is the normal physiologic process that is used by vertebrates to maintain a constant bone mass during the period bracketed by the end of puberty and the onset of gonadal failure in later life. Besides the well-characterized and critical process of local regulation of bone remodeling, achieved by autocrine and paracrine mechanisms, recent genetic studies have shown that there is a central control of bone formation, mediated by a neuroendocrine mechanism. This central regulation involves **leptin**, an adipocyte-secreted hormone that controls body weight, reproduction and bone remodeling, and which binds to and exerts its effect through the cells of the hypothalamic nuclei in the brain. This genetic result in mice is in line with clinical observations in humans and generates a whole new direction of research in bone physiology. BioEssays 22:970-975, 2000.

L20 ANSWER 8 OF 11 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2000:403910 BIOSIS
DOCUMENT NUMBER: PREV200000403910
TITLE: Central control of bone mass by **leptin** in rats.
AUTHOR(S): Holzmann, T. (1); Schilling, A. F. (1); Beil, T. (1); Rueger, J. M. (1); Karsenty, G.; **Amling, M. (1)**
CORPORATE SOURCE: (1) Trauma Surgery, Hamburg University, Hamburg Germany
SOURCE: Journal of Bone and Mineral Research, (September, 2000) Vol. 15, No. Suppl. 1, pp. S471. print.
Meeting Info.: Twenty-Second Annual Meeting of the American Society for Bone and Mineral Research Toronto, Ontario, Canada September 22-26, 2000 American Society for Bone and Mineral Research
. ISSN: 0884-0431.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L20 ANSWER 9 OF 11 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2000173379 EMBASE
TITLE: [Osteoporosis: New research results on osteogenesis].
OSTEOPOROSE: NEUE FORSCHUNGSERGEBNISSE ZUR KNOCHENBILDUNG.
AUTHOR: **Amling M.**
CORPORATE SOURCE: . amling@uke.uni-hamburg.de
SOURCE: Orthopade, (2000) 29/4 (354-355).
ISSN: 0085-4530 CODEN: ORHPBG
COUNTRY: Germany
DOCUMENT TYPE: Journal; Note
FILE SEGMENT: 022 Human Genetics
033 Orthopedic Surgery
LANGUAGE: German

L20 ANSWER 10 OF 11 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 2000123439 MEDLINE
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TITLE: **Leptin** inhibits bone formation through a hypothalamic relay: a central control of bone mass.
AUTHOR: Ducy P; **Amling M**; Takeda S; Priemel M; Schilling A F; Beil F T; Shen J; Vinson C; Rueger J M; Karsenty G
CORPORATE SOURCE: Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, Texas 77030, USA.

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AB Gonadal failure induces bone loss while obesity prevents it. This raises the possibility that bone mass, body weight, and gonadal function are regulated by common pathways. To test this hypothesis, we studied **leptin**-deficient and **leptin** receptor-deficient mice that are obese and hypogonadic. Both mutant mice have an increased bone formation leading to high bone mass despite hypogonadism and hypercortisolism. This phenotype is dominant, independent of the presence of fat, and specific for the absence of **leptin** signaling. There is no **leptin** signaling in osteoblasts but intracerebroventricular infusion of **leptin** causes bone loss in **leptin**-deficient and wild-type mice. This study identifies **leptin** as a potent inhibitor of bone formation acting through the central nervous system and therefore describes the central nature of bone mass control and its disorders.

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ACCESSION NUMBER: 2000:419705 BIOSIS
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TITLE: **Leptin** controls bone formation exclusively through a central pathway and at a dose that has no effect on body weight.
AUTHOR(S): Takeda, S. (1); Elefteriou, F. (1); Priemel, M.; Rueger, J. M.; **Amling, M.**; Ducy, P. (1); Karsenty, G. (1)
CORPORATE SOURCE: (1) Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, TX USA
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